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       Copyright
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updates/sec Search time 72.9307 S (without alignments) 4925.234 Million cell

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MGTSHPAFLVLGCLLTGLSL.. US-10-027-400-2 5652 1 MGTSHPAFLVLGCL score: Sequence: Title: Perfect

0.5 Gapext BLOSUM62 Gapop 10.0

Scoring table:

residues 329844858 1396920 seqs, Searched: 1396920 hits satisfying chosen parameters of Total number

2000000000 length: length: seq seq 08 08 Minimum Maximum

Minimum Match Maximum Match Listing first Post-processing:

. 0% . 100% . 45 summaries

Database

Published Applications AA:*

| cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
| cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
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| cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:* Published

number of results predicted by chance to have a sor equal to the score of the result being prisanalysis of the total score distribution. the number than or derived by Pred. No. is t score greater 1.8 score and is

SUMMARIES

	Description	Sequence 2,	0, Ap	Api	equence 2, A	equence 50, 1	equence 35, 1	168,	439,	Sequence 1304, Ap	10, A <u>I</u>	4, App	Sequence 36, Appl	8, App
	ID	769-987	6-60-	US-09-866-510-2	US-10-027-400-2	4	7-6	US-10-322-696-168	US-10-741-601-439	US-10-741-600-1304	US-09-866-510-10	US-09-866-510-4	US-09-955-363-36	US-09-866-510-8
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03-09-866-510-6	S-09-961-403 S-10-300-666	8 03-10-322-838-18 US-09-866-510-12	S US-10-637-356-	5 US-10-637-356-	5 US-10-637-356-	5 US-10-637-356-	6 US-10-664-421-	US-09-866-510-2	US-09-955-363	S US-10-394-322A	5 US-10-367-639-3	4 US-10-027-400-	US-09-866-510-1	US-09-866-510-2	US-09-866-51	US-09-866-510-1	US-09-939-754-	US-09-939-832-	US-09-939-833-	6 US-10-763-418-	3 US-10-099-895-3	4 US-10-192-867-	5 US-10-295-027-	5 US-10-4	4 US-10-192-867-	US-09-944-807-1	7 US-10-741-600-157	7 US-10-741-600-1571	6 US-10-408-765A-23	4 US-10-060-065-2
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ALIGNMENTS

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RESULT 1
US-09-769-987-2
; Sequence 2, Application US/09769987
; Sequence 2, Application US/09769987
; Patent No. USZ0020055129A1
; GENERAL INFORMATION:
APPLICANT: Matsui, Toshimitsu
APPLICANT: Matsui, Toshimitsu
APPLICANT: Matsui, Toshimitsu
APPLICANT: Pierce, Jacalyn H.
TITLE OF INVENTION: Antibodies for the Alpha Platelet-Derived Growth Factor Receiving APPLICATION NUMBER: US/09/769,987
CURRENT APPLICATION NUMBER: US 08/439,095
PRIOR APPLICATION NUMBER: US 08/439,095
PRIOR FILING DATE: 1995-06-02
; PRIOR FILING DATE: 1995-06-02
; PRIOR APPLICATION NUMBER: US 07/308,282
; PRIOR PILING DATE: 1992-07-20
; PRIOR FILING DATE: 1992-07-20
; PRIOR FILING DATE: 1995-06-05
; RIOR FILING DATE: 1995-06-05
; RIOR FILING DATE: 1995-07-20
; RIOR FILING DATE: 1907-05-07-20
; RIOR FILING DATE: 1907-05-05
; RIOR FILING DATE: US 07/308,282
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; OTHER INFORMATION: Description of Arti;
; OTHER INFORMATION: synthetic construct
US-09-769-987-2
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ö Gaps .; 0 Length 1089; Indels Score 5652; DB 9; Pred. No. 1.2e-311; ; Mismatches 0; .; 0 100.0%; Conservative Query Match Best Local Similarity Matches 1089;

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                                                                                                                   Score 5652;
Pred. No. 1
                       Sequence 90, Application US/09919497
; Sequence 90, Application US/09919497
; Patent No. US20020106662A1
; GENERAL INFORMATION:
; APPLICANT: Mutter, George L.
; TITLE OF INVENTION: PROGNOSTIC CLASSIFICATI
; FILE REFERENCE: B0801/7225
; CURRENT APPLICATION NUMBER: US/09/919,497
; CURRENT FILING DATE: 2001-07-31
; PRIOR APPLICATION NUMBER: US 60/221,735
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 100
; SOFTWARE: Patentin version 3.0
; SEQ ID NO 90
; LENGTH: 1089
; TYPE: PRT
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US-10-027-400-2

; Sequence 2, Application US/10027400
; Publication No. US20030017535A1
; GENERAL INFORMATION:
; APPLICANT: WILLIAMS, Lewis T.
; ESCOBEDO, Jaime A.
; TITLE OF INVENTION: PLATELET-DE
; TUMBER OF SEQUENCES: 14
; CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Tc
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; Sequence 2, Application US/09866510
; Patent No. US20020111304A1
; GENERAL INFORMATION:
; APPLICANT: KAZLAUSKAS, ANDRIUS
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING FIBROTIC
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING FIBROTIC
; CURRENT APPLICATION NUMBER: US/09/866,510
; CURRENT FILING DATE: 2001-05-25
; PRIOR PILING DATE: 2000-12-01
; PRIOR FILING DATE: 2001-05-07
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Patentin Ver. 2.1
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Mismatches 0;
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Best Local Similarity 100.0%;
Matches 1089; Conservative
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Pred. No. 1.2e-311;
Mismatches 0;
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Sequence 50, Application US/10394322A

Publication No. US20030232391A1

GENERAL INFORMATION:
APPLICANT: BYESCOCK, John C.
TITLE OF INVENTION: IDENTIFICATION OF KINASE
FILE REFERENCE: 39750-0006 US
CURRENT APPLICATION NUMBER: US/10/394,322A

CURRENT FILING DATE: 2003-03-20

PRIOR FILING DATE: 2002-03-21

NUMBER OF SEQ ID NOS: 70

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 50

LENGTH: 1089
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Best Local Similarity 100.
Matches 1089; Conservative
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US-10-394-322A-50
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  20th
                                                       COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30
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[.2e-311;
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  Street
                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/027,400
FILING DATE: 19-Dec-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                      APPLICATION NUMBER: US/08/461,917
FILING DATE: 05-JUN-1995
APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     Score 5652;
Pred. No. 1
                                                                                                                                                                                                                            NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 23071
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2400
TELEFAX: 415/326-2422
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE: CHARACTERISTICS:
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nilarity 100.0%; F
Conservative 0;
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STREET: One Market,
CITY: San Francisco
STATE: California
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MOLECULE TYPE: protein;
SEQUENCE DESCRIPTION: 8
                               COUNTRY:
ZIP: 9410
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Matches 1089; Conser
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US-10-367-639-35

Sequence 35, Application US/10367639

Publication No. US20040001807A1

GENERAL INFORMATION:

APPLICANT: Cornell Research Foundation,

APPLICANT: Edelberg, Jay M.

APPLICANT: Rafii, Shahin

APPLICANT: Hong, Mun K.

APPLICANT: West, Michael D.

TITLE OF INVENTION: Endothelial Precursc

FILE REFERENCE: 1676.004US1

CURRENT APPLICATION NUMBER: US/10/367,63

CURRENT FILING DATE: 2003-02-13

NUMBER OF SEQ ID NOS: 36

SOFTWARE: FastSEQ for Windows Version 4.

SEQ ID NO 35

LENGTH: 1089

TYPE: PRT
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Best Local Similarity 100.
Matches 1089; Conservative
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US-10-367-639-35
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US-10-741-601-439

'Sequence 439, Application US/10741601

'Publication No. US20040166519A1

GENERAL INFORMATION:

APPLICANT: CARGILL, Michele et al.

TITLE OF INVENTION: GENETIC POLYMORPHISMS AS;

TITLE OF INVENTION: STENOSIS, METHODS OF DE;

FILE REFERENCE: CL001500

CURRENT APPLICATION NUMBER: US/10/741,601

CURRENT FILING DATE: 2003-12-22

NUMBER OF SEQ ID NOS: 26415

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 439

TYPE: PRT
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Best Local Similarity 100.0%; Pred. No. 1.2e-311;
Matches 1089; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                 Sequence 168, Application US/10322696; Sequence 168, Application US/10322696; Publication No. US20040166490A1; GENERAL INFORMATION:
APPLICANT: Morris, David W.
APPLICANT: Malandro, Marc; TITLE OF INVENTION: NOVEL THERAPEUTIC TARGET; FILE REFERENCE: 529452001200; CURRENT FILING DATE: 2003-10-17; NUMBER OF SEQ ID NOS: 186; SOFTWARE: FastSEQ for Windows Version 4.0; SEQ ID NO 168; LENGTH: 1089
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Pred. No. 1.2e-311;
0; Mismatches 0;
                                                                      US-10-741-600-1304

Sequence 1304, Application US/10741600

Publication No. US20050026169A1

GENERAL INFORMATION:

APPLICANT: CARGILL, Michele et al.

TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSO

TITLE OF INVENTION: MYOCARDIAL INFARCTION, ME

FILE REFERENCE: CL001499

CURRENT APPLICATION NUMBER: US/10/741,600

CURRENT FILING DATE: 2003-12-22

NUMBER OF SEQ ID NOS: 73997

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 1304

LENGTH: 1089
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Best Local Similarity 100.0%;
Matches 1089; Conservative
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                 Score 5652; DB 16
Pred. No. 1.2e-311
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Pred. No. 1.8e-311;
1; Mismatches 0;
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Patent No. US20020111304A1

GENERAL INFORMATION:
APPLICANT: KAZLAUSKAS, ANDRIUS
APPLICANT: IKUNO, YASUSHI
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOI
FILE REFERENCE: ERM-104.01
CURRENT APPLICATION NUMBER: US/09/866,510
CURRENT FILING DATE: 2001-05-25
PRIOR FILING DATE: 2000-12-01
PRIOR FILING DATE: 2001-05-07
NUMBER OF SEQ ID NOS: 33
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 10
LENGTH: 1089
TYPE: PRI
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Best Local Similarity 99.9%;
Matches 1088; Conservative
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     APPLICANT: KAZLAUSKAS, ANDRIUS
APPLICANT: IKUNO, YASUSHI
TITLE OF INVENTION: METHODS AND COMPOSITIONS FO
FILE REFERENCE: ERM-104.01
CURRENT APPLICATION NUMBER: US/09/866,510
CURRENT FILING DATE: 2001-05-25
PRIOR APPLICATION NUMBER: 60/250,747
PRIOR FILING DATE: 2000-12-01
PRIOR APPLICATION NUMBER: 60/289,103
PRIOR FILING DATE: 2001-05-07
NUMBER OF SEQ ID NOS: 33
SOFTWARE: Patentin Ver. 2.1
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Best Local Similarity 99.9%;
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GENERAL INFORMATION
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Bell, Lillian A.
Kindsvogel Ph.D., Wayne R.
TITLE OF INVENTION: METHODS OF PRODUCING SECRETED RECEPTOR ANALOGS
AND BIOLOGICALLY ACTIVE DIMERIZED POLYPEPTIDE
                                                                                                         VILSFENNGDYMDMKQADTTQYVPMLERKEVSKYSDIQRSLYDRPASYKKKSMLDSEVKN
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                                                                                                                                                                                                                                                                             FILING DATE: <Unknown>
APPLICATION NUMBER: US 07/347,291
FILING DATE: 02-MAY-1989
ATTORNEY/AGENT INFORMATION:
NAME: Maki J.D., David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 990008.446C3
TELECOMMUNICATION INFORMATION:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/955,363
FILING DATE: 18-Sep-2001
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/634,510
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed and Berry
STREET: 6300 Columbia Center
CITY: Seattle
STATE: WA
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Patent No. US20020173621A1
GENERAL INFORMATION:
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MEDIUM TYPE: Floppy disk
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TELEFAX: 206-682-6031
TELEX: 3723836
INFORMATION FOR SEQ ID NO: 36:
SEQUENCE CHARACTERISTICS:
LENGTH: 1089 amino acid
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; Patent No. US20020111304A1
; GENERAL INFORMATION:
APPLICANT: KAZLAUSKAS, ANDRIUS
; APPLICANT: IKUNO, YASUSHI
; TITLE OF INVENTION: METHODS AND COMPOSITY
; FILE REFERENCE: ERM-104.01
; CURRENT APPLICATION NUMBER: 60/250,747
; PRIOR APPLICATION NUMBER: 60/250,747
; PRIOR FILING DATE: 2000-12-01
; PRIOR FILING DATE: 2001-05-07
; NUMBER OF SEQ ID NOS: 33
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; Sequence 6, Application US/09866510
; Patent No. US20020111304A1
; GENERAL INFORMATION:
; APPLICANT: KAZLAUSKAS, ANDRIUS
; APPLICANT: IKUNO, YASUSHI
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TRE
; FILE REFERENCE: ERM-104.01
; CURRENT FILING DATE: 2001-05-25
; PRIOR APPLICATION NUMBER: 60/250,747
; PRIOR FILING DATE: 2000-12-01
; PRIOR FILING DATE: 2001-05-07
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PatentIn Ver. 2.1
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Sequence 4, Application US/09961403

Publication No. US20030077589A1

GENERAL INFORMATION:

APPLICANT: HE-STUMPP, HOLGER

APPLICANT: KREFT, BERTHOLT

APPLICANT: KREFT, BERTHOLT

APPLICANT: WINTERHAGER, ELKE

APPLICANT: WINTERHAGER, ELKE

APPLICANT: REGIDOR, PEDRO

TITLE OF INVENTION: METHOD FOR IN VITRO DIAGNOSIS OF

FILE REFERENCE: SCH-1789

CURRENT APPLICATION NUMBER: US/09/961,403

CURRENT FILING DATE: 2001-09-25

NUMBER OF SEQ ID NOS: 15

SOFTWARE: PatentIn Ver. 2.1
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                                                                                                                                                                           Score 5636.5; DB 10;
Pred. No. 9.2e-311;
); Mismatches 0;
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Best Local Similarity 99.9%;
Matches 1088; Conservative
                                                                                                                               ; SEQ ID NO 4
; LENGTH: 1088
; TYPE: PRT
; ORGANISM: Homo sapiens
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US-10-027-400-2 5652 1 MGTSHPAFLVLGCL score Title: Perfect

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ALIGNMENTS

WPI; 2002-179967/23 N-PSDB; ABK35520.

Diagnosing endometrial cancer comprises determining expression of nucleic acid molecules or expression products that are differentially expressed in normal and malignant endometrium.

English Claim 33; Page 214-217; 233pp;

The invention relates to diagnosing endometrial cancer in a subject suspected of having endometrial cancer comprising determining the expression of a set of nucleic acid molecules or expression products in an endometrial sample suspected of being cancerous, where the set of nucleic acid molecules comprises at least 2 nucleic acid molecules selected from 50 fully defined sequences as given in the specification. The nucleic acids are used as an array of at least 2 of the 50 nucleic acids bound to a solid substrate. Also included is a solid-phase protein microarray comprising at least 2 antibodies or its antigen binding fragments, that specifically bind at least 2 different polypeptides from the 50 fully defined sequences as given in the specification, fixed to a solid substrate. The methods and arrays are useful for the diagnosis of

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/label= Signal_peptide_
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/label= Extracellular_
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prostate cancer; platelet-derived growth factor receptor alpha;
chromosome 4.
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                                                                                                                                                                     The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative diseases (e.g. cancer, psoriasis) or fibrotic diseases (e.g. cancer, psoriasis) or fibrotic diseases (e.g. cancer, psoriasis) or fibrotic diseases (e.g. compounds for treating or preventing the development of diseases involving cell contraction, e.g. fibrotic diseases. This is the amino acid sequence of human platelet derived growth factor receptor (PDGFR) alpha used to make mutant PDGFR alpha proteins for use in treating cfibrotic diseases
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larity 100.0%;
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)B; ABS57780.
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Matches 1089; Conser
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LGACTKSGPIY1 ITEYCFYGDLVNYLHKNRDSFLSHHPEKPKKELDIFGLNPADESTRSY
                                                                                                                                                                                   Treating a vascular condition, e.g. myocardial infarction, atherosclerosis, ischemia, congestive heart failure, hypertension, stroke, thrombosis, arrhythmia or tachycardia, by administering endothelial precursor cells.
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PDGF alpha receptor; PDGF beta receptor; endothelial precursor
vascular disease; cardiant; cell therapy.
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                                                                              The present invention describes a humanised baculovirus (I) which comprises a modified baculovirus genome having a nucleic acid molecule encoding a therapeutic agent and a polypeptide which functions to target the baculovirus to at least one cell type. Also described is a pharmaceutical composition comprising (I). (I) has cytostatic activity, and can be used in gene therapy. The baculovirus is useful in the manufacture of a medicament for the treatment of cancer, particularly prostate cancer. The present sequence represents the human plateletderived growth factor receptor alpha protein, which is specified in the exemplification of the present invention. N.B. The present sequence is not given in the specification but is referred to in Claim 33 as Genbank accession number NM_006206
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                    New baculovirus having a modified genome encoding useful in the manufacture of a medicament for the particularly prostate cancer.
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Matches 1089; Conser
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The present invention relates to a method for identifying a ligand (L), which binds to an inactive conformation of target protein kinase (T). The method involves contacting inactive conformation of (T), which contains or is modified to contain a reactive group at or near a binding site of interest, with one or more ligand candidates capable of covalently bonding to the reactive group thus forming a kinase-(L) conjugate (C). The method is useful for identifying protein kinase inhibitors that preferentially bind to inactive conformation of a target protein kinase. The present sequence is a protein kinase which may be modified via an amino acid substitution, for use in the method of the invention.
ing ligand binding to inactive conformation of target protein () comprises contacting the conformation modified (T) which reactive group at binding site, with ligands and detecting gand conjugate formation.
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          The present invention relates to a method of treating a vascula: condition in a mammal, which comprises administering to the mamm therapeutic amount of endothelial precursor cells. The method an of the invention are useful for treating a vascular condition, amyocardial infarction, atherosclerosis, ischaemia, tachycardia, congestive heart failure, peripheral vasculature disorder, hyperstroke, thrombosis, arrhythmia or tachycardia. The present seque protein shown in the exemplification of the invention
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The present invention relates to hepatic-fibrosis disease markers (ADF90539-ADF90871) and related proteins (ADF90872-ADF90917). The sequences are useful for detecting and treating hepatic fibrosis caused by alcohol consumption, virus infection, etc., and the associated chronic hepatitis, etc. leading to liver cirrhosis and hepatic carcinoma. The markers allow the cause of hepatic fibrosis to be clarified (diagnostic precision), so more suitable treatments can be developed and given.
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antibodies, useful for improved diagnosis, screening and developing
to treat hepatitis, to control cirrhosis and carcinoma.
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protein of the invention
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08-JAN-2003;
13-JUN-2003;
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The invention relates to a novel isolated variant platelet derived growth factor receptor alpha (PDGFRA) polypeptide. The polypeptide of the invention is a type III receptor tyrosine kinase (RTK) and may be useful for screening for a compound that may influence PDGFRA-mediated neoplasia in a mammal. The current sequence is that of the human PDGFRA wild-type
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Pred. No. 0;
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                                                                                                                                New isolated variant platelet derived polypeptide, useful for screening for PDGFRA-mediated neoplasia in a mammal.
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UNIV OREGON HEALTH SCI.
DANA FARBER CANCER INST INC
BRIGHAM & WOMENS HOSPITAL.
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The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples, where a higher level of protein expression in the first soft tissue sample indicates the presence of soft tissue sarcoma. The method of the invention has cytostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated protein of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor.
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y expression issue sample soft tissue

Early detection of soft tissue sarcoma comprises determining of a gene in a first soft tissue sample and a normal soft tiand comparing the gene expression, also useful in treating s

WPI; 2004-441208/41

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The present invention describes human cancer-associated (CA) nucleotide sequences (I). Also described: (1) an expression vector comprising (I); (2) a host cell comprising (I) or the expression vector; (3) a microarray for detecting a CA nucleic acid; (4) an isolated polypeptide encoded within an open reading frame of a CA sequence; (5) an isolated antibody, or its antigen binding fragment, that binds to the above polypeptide; (6) a hybridoma that produces the monoclonal antibody described above; (7) a pharmaceutical composition comprising the antibody and a pharmaceutical excipient; (8) a kit for detecting or diagnosing cancer cells, comprising the above (monoclonal) antibody or polynucleotide that selectively hybridises to any of the polynucleotide sequences mentioned above; (9) methods for diagnosing cancer or for detecting the presence or absence of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein sequence SEQ ID NO:168.
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                                               RDIMHDSNYVSKGSTFLPVKWMAPESIFDNLYTTLSDVWSYG1LLWEIFSL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human; cancer-associated gene; cancer-associated protein; gene therapy; vaccine; tyrosine kinase antagonist; G-protein coupled receptor antagonist; cancer; lymphoma.
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cancer cells in an individual; (10) a method for inhibiting growth of cancer cells in an individual; (11) a method for delivering a therapeutic agent to cancer cells in an individual; (12) an electronic library comprising the polynucleotide or polypeptide, or their fragments, methods for detecting cancer associated with expression of a polypeptide or the presence of the antibody in a test cell or serum sample; (15) a method for screening for a bioactive agent capable of modulating the activity of a CA protein encoded by the above nucleic acid molecule; and can gene therapy, in vaccines, as a tyrosine kinase antagonist, and as a G-protein coupled receptor antagonist. The compositions and methods of the present invention can be used for diagnosing, preventing and treating cancer, especially lymphomas. They may also be used in screening for agents that may be used for treating or preventing cancer. The present sequence represents a human CA gene amino acid sequence, which is given in the exemplification of the present invention. Note: The sequence data for this patent did not form part of the printed sequence is specification, but was obtained in electronic format directly from WIPO ö 300 240 240 360 420 480 540 120 120 180 180 600 600 9 TEITTDVEKIQEIRYRSKLKLIRAKEEDSGHYTIVAQNEDAVKSYTFELLTQVPSSILDL ·, 1089; Length ъ, ; 0 DB ftp.wipo.int/pub/published_pct_sequences Score 5652; Pred. No. 0; ; Mismatches .; 0 100.0%; Conservative al Similarity 1089; Conser Sequence 1089 AA; 61 / Match Local S 481 121 121 241 181 181 241 301 361 421 541 301 361 481 601 541 Query Mat Best Loca Matches 1 Б a g d a 엄 В 원 ò ò ð ð ਠੋ ਠੇ à ò à

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LGACTKSGPIYIITEYCFYGDLVNYLHKNRDSFLSHHPEKPKKELDIFGLNPADESTRSY

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LGACTKSGPIYIITEYCFYGDLVNYLHKNRDSFLSHHPEKPKKELDIFGLN
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the nucleotide sequences given in the specification in the individual's nucleic acids, where the presence of the SNP is correlated with an altered risk for myocardial infarction in the individual. The invention further comprises an isolated nucleic acid molecule comprising at least secontiquous nucleotides where one of the nucleotides is an SNP given in the specification or its complement and encoding any one of the amino acid sequence given in the specification; an antibody that specifically binds to the polypeptide or its antigen-binding fragment; an amplified polynucleotide containing an SNP given in the specification and which is between about 16 and 1000 nucleotides in specification and which is between about 16 and 1000 nucleotides in length; a kit for detecting an SNP in a nucleic acid, comprising the polynucleotide, a buffer and an enzyme; a muchod of detecting an SNP in a nucleic acid molecule; a method of detecting a variant polypeptide; and a nucleic acid soft infarction and section method has cardiant activity. The nucleic acids of the invention may be used in gene therapy. The method is useful in identifying an individual who has an increased or decreased risk for developing myocardial infarction. This sequence represents the protein of a human myocardial infarction. This sequence was not shown in the specification. The sequence has come from a electronic sequence listing downloaded from the WIPO website.
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/label= N-glycos_site
76. .78
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The TR4 clone is the largest cDNA clone related to the T11 genomic clone, isolated from a library prepd. from human thymus DNA. The T4 cDNA clone was isolated from a M426 human embryo fibroblast cDNA library. The coding region can be introduced into the pSV2 gpt vector with a simian sarcoma virus LTR as a promoter and expressed in a host. The resulting protein is a novel PDGF receptor designated type alpha (the known receptor is designated type beta). The polypeptide has a calculated molecular mass of L20 kD and has all the characteristics of a membrane spanning tyrosine peptide and a ligand binding domain which has structural homology with the PDGF-R/CSF1-R subfamily. Ten Cys residues are spaced at the same positions as in other receptors of the sub-family and eight potential N-linked glycosylation sites are also present. A hydrophobic segment spans the membrane and the cyto-plasmic region comprises a juxtamembrane region and a hydrophilic C-terminal tail. The TK region includes the consensus ATP binding sequence (G-X-G-X-X-G. . .K) and a tyrosine autophosphorylation site homologous to that of pp60(v-src).
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The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative
cell migration; extracellular matrix synthesis; secretion; cell contraction; cancer; psoriasis; fibrotic diseases; atherosclerosis liver cirrhosis; pulmonary fibrosis; kidney fibrosis; scleroderma; keloid; hypertrophic scar; wound; proliferative vitreoretinopathy;
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Human; platelet derived growth factor receptor alpha; PDGFRalpha; hepatotropic; dermatological; nephrotropic; vulnerary; ophthalmological; cytostatic; gene therapy; vaccine; phosphoinositide-Kinase-Inhibitor-3; phospholipase-Inhibitor-C; receptor tyrosine kinase; cell proliferation; cell migration; extracellular matrix synthesis; secretion; cell contraction; cancer; psoriasis; fibrotic diseases; atherosclerosis; liver cirrhosis; pulmonary fibrosis; kidney fibrosis; scleroderma; keloid; hypertrophic scar; wound; proliferative vitreoretinopathy; mutein.
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The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative contraction. Exemplary diseases or disorders include cell proliferative cancer, psoriasis) or fibrotic diseases (e.g. atherosclerosis, liver cirrhosis, pulmonary fibrosis, kidney fibrosis, scleroderma, keloids, hypertrophic scars, skin wound healing or proliferative vitreoretinopathy). The method may be used in identifying compounds for treating or preventing the development of diseases involving cell contraction, e.g. fibrotic diseases. This is the amino acid sequence of human platelet derived growth factor receptor (PDGFR)
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The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative (e.g. cancer, psoriasis) or fibrotic diseases (e.g. atherosclerosis, liver cirrhosis, pulmonary fibrosis, kidney fibrosis, scleroderma, keloids, hypertrophic scars, skin wound healing or proliferative vitreoretinopathy). The method may be used in identifying compounds for treating or preventing the development of diseases involving cell contraction, e.g. fibrotic diseases. This is the amino acid sequence of human platelet derived growth factor receptor (PDGFR)
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                                                                                                                                 New polypeptide for treating or preventing diseases associal abnormal platelet-derived growth factor (PDGF) level, e.g. proliferative or fibrotic diseases, comprises a portion of or -beta.
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Pred. No. 0;
0; Mismatches
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          2000US-0250747P
2001US-0289103P
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Best Local Similarity 99.9%;
Matches 1088; Conservative
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N-PSDB; ABS57782.
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SFL 1089

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MGTSHPAFLVLGCLLTGLSL... US-10-027-400-2 5652 1 MGTSHPAFLVLGCL score: Sequence Title: Perfect

BLOSUM62 Gapop 10.0 Scoring table:

74649064 residues S 0 Gapext 513545 segs, Searched:

satisfying chosen parameters hits of Total number

513545

length: 0 length: 2000000000 seq seq 08 08 Minimum Maximum

Minimum Match 0% Maximum Match 100% Listing first 45 summaries Post-processing:

/cgn2_6/ptodata/1/iaa/5A_COMB.pep:*/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*/cgn2_6/ptodata/1/iaa/PcTUS_COMB.pep:*/cgn2_6/ptodata/1/iaa/backfiles1.pep:* Patents Issued 12 m 4 5 9 Database

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SUMMARIES

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Result No.	ŭ	Query	Length	DB	ID	scription
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7	65	00.	08	N	0-51	equence 4, Appl
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4	65	00	08	ო	-462-72	equence 2, Appl
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9	65	00	08	4	-46	quence 2, Appl
7	65	00	08	4	-464-43	2, Appl
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ALIGNMENTS

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RESULT 1
US-08-168-917-4

; Sequence 4, Application US/08168917
; Patent No. 5686572
; GENERAL INFORMATION:
; APPLICANT: Wolf, David
; APPLICANT: Glese, Neill A.
; APPLICANT: Glese, Neill A.
; APPLICANT: Williams, Lewis T.
; TITLE OF INVENTION: DOMAINS OF EXTRACELLULAR REGION OF HUMAN
; TITLE OF INVENTION: DOMAINS OF EXTRACELLULAR REGION OF HUMAN
; TITLE OF INVENTION: DOMAINS OF EXTRACELLULAR REGION OF HUMAN
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APPLICATION NUMBER: US/08/168, >1,

FILING DATE:

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/07/650, 793

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: Ching, Edwin P.

REGISTRATION NUMBER: 34,090

REFERENCE/DOCKET NUMBER: 12418-14

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 326-2400

TELEFAX: (415) 326-2422

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

1.ENGTH: 1089 amino acids
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ZIP: 94105

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Ve
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US-08-168-917-4
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Length 1089;

DB 1;

Score 5652;

100.08;

Query Match

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RESULT 2
US-08-460-510-4

Sequence 4, Application US/08460510

Patent No. 587218

GENERAL INFORMATION:
APPLICANT: Wolf, David
APPLICANT: Tomlinson, James E.
APPLICANT: Williams, Lewis T.
APPLICANT: Bscobedo, Jaime A.
APPLICANT: Scopedo, Jaime A.
APPLICANT: Scopedo, Jaime A.
APPLICANT: Jaime A.
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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NAME: Dow, Karen B.

REGISTRATION NUMBER: 29,684

REFERENCE/DOCKET NUMBER: 012418-001430

TELECOMMUNICATION INFORMATION:

TELEPHONE: (415) 326-2400

TELEFAX: (415) 326-2422

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:
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Pred. No. 0;
; Mismatches
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FILING DATE: 02-JUI
CLASSIFICATION: 43
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Best Local Similarity
Matches 1089; Conser
                             SDLVEDSFL
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Sequence 4, Application US/08460490
Patent No. 5891652
GENERAL INFORMATION:
APPLICANT: Wolf, David
APPLICANT: Tomlinson, James E.
APPLICANT: Fretto, Larry J.
APPLICANT: Giese, Neill A.
APPLICANT: Escobedo, Jaime A.
APPLICANT: Williams, Lewis T.
APPLICANT: Williams, Lewis T.
TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR
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APPLICATION NUMBER: US/08/460,490
FILING DATE: 02-JUN-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Dow, Karen B.
                                                                                                                                                                                                                                                                                                                                                                                                 Score 5652;
Pred. No. 0;
; Mismatches
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                         and
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REFERENCE/DOCKET NUMBER: 012418-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2400
TELEFAX: (415) 326-2422
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                          TOWNSEND
                                                                                 ZIP: 94105

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Best Local Similarity 100.0%;
Matches 1089; Conservative (
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NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND an
STREET: One Market Pla
CITY: San Francisco
STATE: California
COUNTRY: US
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MOLECULE TYPE:
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); Mismatches
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 2307K-267-2-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2400
TELEFAX: 415/326-2422
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1089 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
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APPLICANT: WILLIAMS, Lewis T.
APPLICANT: ESCOBEDO, Jaime A.
TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR:
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market, Steuart Street Tower, 20th Floor
CITY: San Francisco
STATE: California
  SGAFGKVVEGTAYGLSRSQPVMKVAVKMLKPTARSSEKQALMSELKIMTHL
                                               SGAFGKVVEGTAYGLSRSQPVMKVAVKMLKPTARSSEKQALMSELKIMTHL
                                                                    LGACTKSGPIYIITEYCFYGDLVNYLHKNRDSFLSHHPEKPKKELDIFGLN
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,728
FILING DATE: 05-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
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Sequence 2, Application US/08462728
Patent No. 6043211
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APPLICANT: ESCOBEDO, Jaime A.

TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTORS NUMBER OF SEQUENCES: 14

CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew STREET: One Market, Steuart Street Tower, 20th Floor CITY: San Francisco STATE: California

COUNTRY: USA
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/461,917
FILING DATE: 05-JUN-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
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Pred. No. 0;
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REFERENCE/DOCKET NUMBER: 2307K-267-2
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                Sequence 2, Application US/08461917
Patent No. 6372438
GENERAL INFORMATION:
APPLICANT: WILLIAMS, Lewis T.
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SEQUENCE CHARACTERISTICS:
LENGTH: 1089 amino acids
TYPE: amino acid
TOPOLOGY: linear
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; MOLECULE TYPE:
US-08-461-917-2
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Best Local Sim
Matches 1089;
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VILSFENNGDYMDMKQADTTQYVPMLERKEVSKYSDIQRSLYDRPASYKKKSMLDSEVKN
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ESCOBEDO, Jaime A.
TITLE OF INVENTION: PLATELET-DERIVED GR
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend a
STREET: One Market, Steuart Street
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94105
COMPUTER READABLE FORM:
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US-08-464-436-2
; Sequence 2, Application US/08464430
; Patent No. 6642022
; GENERAL INFORMATION:
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                                                                               APPLICANT: WILLIAMS, Lewis T. APPLICANT: ESCOBEDO, Jaime A. TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR
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Steuart Street Tower,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   core 5652;
red. No. 0;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 2307K-267-2-3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2400
TELEFAX: 415/326-2422
                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/464,436
FILING DATE: 05-JUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
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Pred.
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APPLICATION NUMBER: US 07/309,32
FILING DATE: 10-FEB-1989
PRIOR APPLICATION DATA:
                                                US/08464436
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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SEQUENCE CHARACTERISTICS:
LENGTH: 1089 amino acids
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                                                                                                                  NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                          Townsend
                                                                                                                                                      STREET: One Market,
CITY: San Francisco
STATE: California
COUNTRY: USA
                          SUL: 5
-08-464-436-2
Sequence 2, Application
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Best Local Similarity
Matches 1089; Conser
                                                          Patent No. 6514723
GENERAL INFORMATION
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Best Local Similarity 100.0%;
Matches 1089; Conservative 0;
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                                Version #1.30
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                                                                                                                                         NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 2307K-267-2-3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2400
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                                                 APPLICATION NUMBER: US/08/464,436
FILING DATE: 05-Jun-1995
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                 Score 5652;
Pred. No. 0;
0; Mismatches
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
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                                                                                                                                                                                                                                                                     ID NO:
                                                                                                                                                                                                                           LENGTH: 1090 amino acids
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ
                                          CURRENT APPLICATION DATA:
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Best Local Similarity
Matches 1089; Conser
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US-09-769-987-2

Sequence 2, Application US/09769987

Patent No. 6660488

GENERAL INFORMATION:
APPLICANT: Matsui, Toshimitsu
APPLICANT: Aaronson, Stuart A.
TITLE OF INVENTION: Antibodies for the Alph
FILE REFERENCE: 14014.026602
CURRENT APPLICATION NUMBER: US/09/769,987

CURRENT FILING DATE: 2001-10-12
PRIOR APPLICATION NUMBER: US 08/450,656
PRIOR FILING DATE: 1995-06-02
PRIOR FILING DATE: 1995-05-11
PRIOR APPLICATION NUMBER: US 07/915,884

PRIOR FILING DATE: 1992-07-20
PRIOR FILING DATE: 1992-07-20

PRIOR FILING DATE: 1999-02-09

NUMBER OF SEQ ID NOS: 2

SOFTWARE: FastSEQ for Windows Version 4.0 4.0

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Pred. No. 0;
; Mismatches
              RESULT 9
US-09-866-510-2
Sequence 2, Application US/09866510
Fatent No. 6667173
GENERAL INFORMATION:
APPLICANT: KAZLAUSKAS, ANDRIUS
TITLE OF INVENTION: METHODS AND COMPOSITIONS
FILE REFERENCE: ERM-104.01
CURRENT APPLICATION NUMBER: US/09/866,510
CURRENT FILING DATE: 2001-05-25
PRIOR APPLICATION NUMBER: 60/250,747
PRIOR APPLICATION NUMBER: 60/250,747
PRIOR FILING DATE: 2000-12-01
PRIOR FILING DATE: 2001-05-07
NUMBER OF SEQ ID NOS: 33
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 2
LENGTH: 1089
TYPE: PRT
CORGANISM: Homo sapiens
US-09-866-510-2
                                                   COMPOSITIONS
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Best Local Similarity 100.0%; Pr
Matches 1089; Conservative 0;
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US-09-949-016-6703
isequence 6703, Application US/09949016
j Patent No. 6812339
j GENERAL INFORMATION:
i APPLICANT: VENTER, J. Craig et al.
i TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
i FILE REFERENCE: CL001307
j CURRENT APPLICATION NUMBER: US/09/949,016
j CURRENT FILING DATE: 2000-04-14
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US-09-919-497-90

i. Sequence 90, Application US/09919497

j. Patent No. 6773883

j. GENERAL INFORMATION:
    TITLE OF INVENTION:
    TITLE OF INVENTION:
    FILE REFERENCE: B0801/7225

j. CURRENT APPLICATION NUMBER: US/09/919,497

cURRENT FILING DATE: 2001-07-31

pRIOR FILING DATE: 2000-07-31

pRIOR FILING DATE: 2000-07-31

number of Seq ID NOS: 100

software: Patentin version 3.0
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Matches 1089; Conservative
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Sequence 4, Application PC/TUS9200730

| Sequence 1, Application PC/TUS9200730
| GENERAL INFORMATION:
| APPLICANT: Wolf, David
| APPLICANT: Tomlinson, James E. |
| APPLICANT: Escobedo, Jaime A. |
| APPLICANT: Williams, Lewis T. |
| TITLE OF INVENTION: DOMAINS OF EXTRACELLULAR REGION OF HUMAN |
| TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR POLYPEPTIDES |
| NUMBER OF SEQUENCES: 23 |
| CORRESPONDENCE ADDRESS: |
| ADDRESSEE: TOWNSEND and TOWNSEND |
| STREET: Steuart Street Tower, 20th Floor | One Market |
| STREET: Steuart Street Tower, 20th Floor | STREET: California |
| COUNTY: San Francisco |
| STATE: California |
| COUNTY: LEVIN CALLOR |
| CAL
                     RDIMHDSNYVSKGSTFLPVKWMAPESIFDNLYTTLSDVWSYGILLWEIFSLGGTPYPGMM
                                         MGTSHPAFLVLGCLLTGLSLILCQLSLPSILPNENEKVVQLNSSFSLRCFGESEVSWQY
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00730
FILING DATE: 19920128
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Ching, Edwin P.
REGISTRATION NUMBER: 12418-14
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2400
TELEFAX: (415) 326-242
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
TENTETH: 1089 amino acids
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PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastSEQ for Windows Version 4.
LENGTH: 1089
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Pred. No. 0;
; Mismatches
                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/00862
FILING DATE: 19920131
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 07/151,141
FILING DATE: 02-FEB-1988
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
ATTORNEY/AGENT INFORMATION:
NAME: Ching, Edwin P.
REGISTRATION NUMBER: 34,090
REFERENCE/DOCKET NUMBER: 2307U-267-2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2400
TELEPHONE: (415) 326-2400
Sequence 4, Application PC/TUS9200862

GENERAL INFORMATION:
APPLICANT: Williams, Lewis T.
APPLICANT: Escobedo, Jaime A.
TITLE OF INVENTION: PLATELET-DERIVED GR
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND and TOWNSEND
STREET: Steuart Street Tower, 20th Fl
CITY: San Francisco
STATE: California
COUNTRY: US
                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.24
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Best Local Similarity 100.0%;
Matches 1089; Conservative
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LENGTH: 1089 amino acids
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INFORMATION FOR SEQ ID NO:
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US-09-866-510-10
i Sequence 10, Application US/09866510
i Patent No. 6667173
i GENERAL INFORMATION:
i APPLICANT: KAZLAUSKAS, ANDRIUS
i APPLICANT: IKUNO, YASUSHI
i TITLE OF INVENTION: METHODS AND COMPOSITIONS FOI
i FILE REFERENCE: ERM-104.01
i CURRENT APPLICATION NUMBER: US/09/866,510
i CURRENT FILING DATE: 2001-05-25
i PRIOR APPLICATION NUMBER: 60/250,747
i PRIOR FILING DATE: 2000-12-01
i PRIOR FILING DATE: 2000-1-0-05
i RIOR FILING DATE: 2000-1-0-05
i RIOMBER OF SEQ ID NOS: 33
i SOFTWARE: PatentIn Ver. 2.1
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; LENGTH: 1089
; TYPE: PRT
; ORGANISM: Homo &
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||SADSG
                                                                                                                               Sequence 36, Application US/08180195
; Sequence 36, Application US/08180195
; Patent No. 5567584
; GENERAL INFORMATION:
; APPLICANT: Sledziewski Ph.D., Andrzej Z
; APPLICANT: Bell, Lillian A.;
; APPLICANT: Kindsvogel Ph.D., Wayne R.;
; TITLE OF INVENTION: METHODS OF PRODUCING SECRETED POLYPEPTI
; TITLE OF INVENTION: FUSIONS
; TITLE OF INVENTION: FUSIONS
; TITLE OF SEQUENCES: 36
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Seed and Berry
; STREET: 6300 Columbia Center
; CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                  SYEKIHLDFLKSDHPAVARMRVDSDNAYIGVTYKNEEDKLKDWEGGLDEQR
         Length 1089
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Pred. No. 0;
1; Mismatches
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                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 98104-7092
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/180,195
FILING DATE:
APPLICATION NUMBER: US/07/634,510
FILING DATE:
APPLICATION NUMBER: US 07/146,877
FILING DATE:
APPLICATION NUMBER: US 07/347,291
FILING DATE: 02-MAY-1989
ATTORNEY/AGENT INFORMATION:
NAME: Maki J.D., David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 31,392
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TELEX: 3723836
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1089 amira
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Matches 1088; Conser
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Search completed: March 11, 2005, 07:50:27 Job time : 36.7522 secs

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Compugen Ltd
GenCore version (c) 1993 - 2005
          Copyright
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protein search, using sw model OM protein

Run on:

March 11, 2005, 07:07:56; Search time 33.7367 Seconds (without alignments) 3105.821 Million cell update

updates/sec

US-10-027-400-2 5652 1 MGTSHPAFLVLGCLLTGLSL... score Title: Perfect so Sequence:

....IDMMDDIGIDSSDLVEDSFL 1089

BLOSUM62 Gapop 10.0 , Scoring table:

Gapext 0.5

283416 segs, 96216763 residues Searched: 283416 of hits satisfying chosen parameters: Total number

seq length: 0 seq length: 2000000000 Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR 79:*
1: pir1:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Result No.	Score	Quer	ا بر	DB	_ (Description
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7	182.	α	04	~	T30815	latelet-derived
Φ	914.	س	Ŋ	~	S44269	latelet-derived
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10	461.	υ.	9	н	JN0677	rotein-tyrosine
11	145	<u>ب</u>	~	Н	A49814	rotein-tyrosi
12	454.	Ŋ.	~	-	TVHUKT	rotein-tyrosi
13	446.	ņ.	7	Н	TVMSKT	rotein-tyrosi
14	16.	5	S	~	151703	-kit-related kin
15	412.	ъ.	$\boldsymbol{\omega}$	-	TVCTMD	phage col
16	400.	4.	4	႕	TVMVMD	n-tyrosi
17	139	4.	~	~	T30816	rophage col
18	52.	23.9	978	7	S16385	phage colon
19	346.	Э.	7	Н	TVHUMD	hage col
20	34	щ	~	Н	TVMSMD	phage colony
21	28	'n	33	~	S09982	ein-tyrosi
22	28	ď	33	N	I78875	eceptor tyrosin
23	27	ä	33	~	160598	-1 tyrosine
24	ä	4	33	N	849010	nic recepto
25	122	i.	34	~	S51656	r endothel
26	206.	۲.	35	~	JC1402	n-tyrosin
27	198.	,	37	~	JC4954	ascular endothel
28	4	0		7	S18827	rotein
29	163.	°.	29	~	A48999	otein-tyrosine
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ALIGNMENTS

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	Species: now Bapiens (man) Date: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 09-Jul-2004 Accession: A40162; A32941
	ın, M.; Miki, T.; Popescu, N.; La Rochelle, W.; Kraus . 1989
	A; Title: Isolation of a novel receptor cDNA establishes the existence of two PDGF receptor A; Reference number: A40162; MUID:89130149; PMID:2536956
	A; Accession: A40162 A; Molecule type: mRNA
	A; Cross-references: UNIPROT: P16234; GB: M21574; NID: 9189733; PIDN: AAA96715.1; PID: 9189734 D: Claescon-Welch I. : Erikgson D : Westermark R : Heldin C.H.
	ci. U.S.A. 86, 4917-4921, 1989 ng and expression of the human A-type pla
	D:89296915; PMID:254488î
	A;Accession: A32941 A;Molecule type: mRNA
	NID:9189725; PIDN:AAA60048.1; PID:
	C;Comment: The extracellular domain is predicted to include five immunoglobulin-like domain
	C;Genecics: A;Gene: GDB:PDGFRA
	A; Cross-references: GDB:120267; OMIM:173490
	y-stimulating factor 1 receptor, immunoglobulin homo
	C;Keywords: ATP; autophosphorylation; dimer; glycoprotein; growth factor receptor; phosp! F:1-24/Domain: signal sequence #status predicted <sig></sig>
	F:25-1089/Product: platelet-derived growth factor receptor alpha #status predicted <mat></mat>
	homology <imm1></imm1>
	n homology
	5-548/Domain: Immunogiopulin 5-548/Domain: transmembrane #
	91-957/Domain: inclacellular #scatus predicted 91-957/Domain: protein kinase homology <kin></kin>
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Gaps

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Indels

Query Match
Best Local Similarity 100.0%; Pred. No. 3.3e-238;
Matches 1089; Conservative 0; Mismatches 0;

Length 1089;

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A)GESTIONES 1-1088 (LEES.)

A)GESTIONES 1-1088 (LEES.)

A)CTOSE-references: UNIPROTIPE20786; GB:MG3837; NID:g202929; PIDN:AAA40743.1; PID:g202930

A)CTOSE-references: UNIPROTIPE20786; GB:MG3837; NID:g202939; MCD: in the authors 'cranslation an additional residue, Val. is shown after position f B; Herren, B: Weyer, K.A.; Bouge, MS.; Lockscher, P.; Pech, M.

A;HILE: COMBERTALION in sequence and affinity of human and rodent PDGF ligands and recept A;Ritle: COMBERT. S33764; MUID:93903723; PMID:9318539

A)ACCESSION: S33764; MUID:9303723; PMID:9318539

A)AGESTION: S32764; MAID: SA20454; MUID:930464; M.

B)AGETION: COASS-REFERENCE: STATION

A)AGETION: NUMBER S25046

A)AGETION: S25100

A)AGETION: S2500

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platelet-derived growth factor receptor alpha precursor - 1 N; Contains: protein-tyrosine kinase (EC 2.7.1.112)
C; Species: Rattus norvegicus (Norway rat)
C; Date: 31-Dec-1992 #sequence revision 31-Dec-1992 #text_change (EC 2.7.1.112)
C; Accession: A34710; S33767; S25100
R; Lee, K.H.; Bowen-Pope, D.F.; Reed, R.R.
Mol. Cell. Biol. 10, 2237-2246, 1990
A; Title: Isolation and characterization of the alpha platel A; Reference number: A34710; MUID:90220609; PMID:2157969
A; Accession: A34710
A; Residues: nucleic acid sequence not shown
A; Molecule type: mRNA
A; Residues: 1-1088 < LEE>
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55; Mismatches 43;
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A;Reference number: I57511; MUID: 91061789; PMID:2174116
A;Accession: I57511
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-1089 <RES>
A;Cross-references: UNIPROT: P26618; GB: M57683; NID: g199783; PIDN: AA39733.1; PID: g199784
A;Genetics:
C;Genetics:
A;Genetics:
C;Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin homology;
C;Superfamily: macrophage colony-stimulating factor 1 receptor; cymonoglobulin homology;
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F;591-957/Domain: protein kinase homology <IMM>
F;591-957/Domain: protein kinase ATP-binding motif
F;42,76,89,103,179,353,359,458,468,506/Binding site: carbohydrate (Asn) (covalent) #statu
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Pred. No. 1.4e-217,
50; Mismatches 48
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S33727
platelet-derived growth factor receptor alpha precursor - mouse platelet-derived growth factor receptor alpha precursor - mouse N; Contains: protein-tyrosine kinase (EC 2.7.1.112)
C; Species: Mus musculus (house mouse)
C; Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 0: Accession: IS7511; S33727
C; Accession: IS7511; S33727
R; Stiles, C.D.; Wang, C.
Mol. Cell. Biol. 10, 6781-6784, 1990
A; Title: Retinoic acid promotes transcription of the platelet-der
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	YEKIHLDFLKSDHPAVARMRVDSDNAYIGYTYKNEEDKLKDWEGGLDE LPDIDPVPEEEDLGKRNRHSSQTSEESAIETGSSSSTFIKREDETIEI 	RESULT 4 151552 platelet-derived growth factor A receptor - African clawed frog C;Species: Xenopus laevis (African clawed frog) C;Species: Xenopus laevis (African clawed frog) C;Species: Xenopus laevis (African clawed frog) C;Accession: 151552 B;Jones, S.D.; Ho, L.; Smith, J.C.; Yordan, C.; Stiles, C.D.; Mercola, M. Dev. Genet. 14, 185-193, 1993 A;Itle: The xenopus platelet-derived growth factor alpha receptor: cDNA cloning and dem ion. A;Reference number: 151552; MUID:93365089; PMID:8358664 A;Retence number: 151552; MUID:93365089; PMID:836652; PIDN:AA49929.1; PID:9214653 C;Genetics: C;Genetics: C;Retycords: A;Retences: UNIPROT:PECOPY (MM) A;Retence number: 10037; Muismetches 153; Indels 8; Gaps 6; C;Retycords: A;Retycords: A;Ret	66 SSDVEIRNEENNSGLFVTVLEVSASAAHTGLYTCYYNHTQTEENELEGRHIYIYVPDPD 125

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43.9%; Pred. No. 1.5e-87;
tive 175; Mismatches 334;
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Cross-references: UNIPROT: P05622; EMBL: X04367; NID: 953618; PIDN: CAA27882.1; PID: 953619; Cross-references: UNIPROT: P05622; EMBL: X04367; NID: 953618; PIDN: CAA27882.1; PID: 953619; Note: part of this sequence, including the amino end of the mature protein, was confir; Comment: The extracellular domain is predicted to include five immunoglobulin homology; Comment: The purified receptor was found be ubiquitinated.

Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin homology; Keywords: ATP; autophosphorylation; glycoprotein; growth factor receptor; heterodimer; 1-31/Domain: signal sequence #status predicted <SIG>
32-1098/Product: platelet-derived growth factor receptor beta #status predicted <MAT>
32-530/Domain: extracellular #status predicted <EXT>
46-101/Domain: immunoglobulin homology <IMM1>
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;227-292/Domain: immunoglobulin homology <IMM3>
;428-509/Domain: immunoglobulin homology <IMM4>
;428-509/Domain: transmembrane #status predicted <TMM>
;531-554/Domain: transmembrane #status predicted <ITMN>
;555-1098/Domain: intracellular #status predicted <INT>
;597-964/Domain: protein kinase homology <KIN>
;605-613/Region: protein kinase ATP-binding motif
;44,88,102,214,291,306,353,370,444,467,478/Binding site: carbohy;53-99,148-189,234-290,435-507/Disulfide bonds: #status predicted
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Nature 323, 226-232, 1986
A;Title: Structure of the receptor for platelet-derived grc A;Reference number: A25742; MUID:87014762; PMID:3020426
A;Accession: A25742
A;Molecule type: mRNA
A;Cross-references: UNIPROT:PO5622; EMBL:X04367; NID:953618
A;Note: part of this sequence, including the amino end of t C;Comment: The extracellular domain is predicted to include C;Comment: The purified receptor was found be ubiquitinated C;Comment: The purified receptor was found be ubiquitinated C;Comment: The purified receptor was found be ubiquitinated C;Comment: The purified sequence #status predicted <SICOMPOMAIN: Bignal sequence #status predicted <SICOMPOMAIN: Signal sequence #status predicted <SICOMPOMAIN: E;32-1098/Product: platelet-derived growth factor receptor F;32-530/Domain: immunoglobulin homology <IMM3>
F;428-509/Domain: immunoglobulin homology <IMM3>
F;428-509/Domain: immunoglobulin homology <IMM3>
F;551-1098/Domain: immunoglobulin homology <IMM3>
F;551-1098/Domain: intracellular #status predicted <INT>F;605-613/Region: protein kinase homology <INM3>F;605-613/Region: protein kinase ATP-binding motif F;44,88,102,214,291,306,353,370,444,467,478/Binding site: C;53-99,148-189,234-290,435-507/Disulfide bonds: #status predicted F;633/Active site: Dys #status predicted F;856/Binding site: Dys #status predicted F;777 (covalent) (by autophos
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Pred. No. 3.3e-94;
2; Mismatches 356;
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498; Conservative 15
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C;Keywords: ATP; autophosphorylation; dimer; glycoprotein; F;1-327/Domain: protein kinase homology (fragment) <KIN>
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S44269
platelet-derived growth factor receptor alpha - zebra fish (fragment)
N;Contains: protein-tyrosine kinase (EC 2.7.1.112)
C;Species: Brachydanio rerio (zebra fish)
C;Date: 13-Jan-1995 #sequence_revision 07-Feb-1997 #text_change 09-Ju
C;Accession: S44269
R;Yu, W.; Richardson, W.D.
submitted to the EMBL Data Library, April 1994
A;Description: Zebrafish Platelet-derived Growth Factor Receptor (Alp A;Reference number: S44269
A;Reference number: S44269
A;Molecule type: mRNA
A;Residues: 1-457 <YUW>
A;Cross-references: UNIPROT: Q90269; EMBL: Z32814; NID: g479105; PIDN: CA C;Superfamily: macrophage colony-stimulating factor 1 receptor; immun
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R; Kubota, T.; Hikono, H.; Sasaki, E.; Sakurai, M.
R; Kubota, T.; Hikono, H.; Sasaki, E.; Sakurai, M.
Gene 141, 305-306, 1994
A; Title: Sequence of a bovine c-kit proto-oncogene cDNA.
A; Reference number: 145877; MUID: 94215924; PMID: 7512939
A; Reference number: 145877; MUID: 94215924; PMID: 7512939
A; Reference number: 145877
A; Residues: 1-977 - KUUB.
A; Cross-references: GB: D16680; NID: 9516659; PIDN: BAA04084.1; PID: 9516660
C; Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin homology cikeywords: ATP; phosphotransferase; tyrosine-specific protein kinase
C; Keywords: ATP; phosphotransferase; tyrosine-specific protein kinase
F; 329-395/Domain: immunoglobulin homology < INM>
F; 588-932/Domain: protein kinase homology < KIN>
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 Score 1914.5; DB Pred. No. 2.5e-76; i Mismatches 41
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y Match
Local Similarity 79.2%;
nes 365; Conservative
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A;Residues: 1 A;Cross-refer	A; Experimental C; Superfamily:	c;keywords: A rotein kinase	F;1-24/DOMAIN F;25-960/Prodi	F;573-916/DOM	F;76,135,149,	Query Match	4 W	Oy 1	Db 1	Ογ 61	DD 26	Oy 118	Db 98	0y 176	Db 149	Oy 217	Db 206	Qy 273	Db 255	Qy 329	Db 313	0у 388	Db 372	Qy 448	Db 427	Ολ 507	Db 484	Oy 556	Db 540
: :: :	189CEATVKGKKFQTIPFNVYALKATSELDLEMEALKTVYKSGETIVVTCAVFN- 239	183 CLHCSANQRGKSMLSKKFTLKVRAAIKAVPVVSVSKTSYLLREGEEFAVTCLIKDV 238	240 NEVVDLQWTYPGEVKGKGITMLEEIKVPSIKLVYTLTVPEATVKDSGDYECAARQATR 297	239 SSSVDSMWIKENSQOTKAQTKKNSWHQGDFSYLRQERLTISSARVNDSGVFMCYANNTFG 298	298 EVKEMKKVTISVHEKGFIEIKPTFSQLEAVNLHEVKHFVVEVRAYPPP-RISWLKNNLTL 356	299 SANVITILEVVDKGFINIFPMMNTTVFVNDGENVDLVVEYEAYPKPVHRQWIYMNRTS 356	357 IENLTEITTDVEKIQEIRYRSKLKLIRAKEEDSGHYTIVAQNEDAVKSYTFELLTQVPSS 416	357 TDKWDDYPKS-ENESNIRYVNELHLTRLKGTEGGTYTFHVSNSDVNSSVTFNVYVNTKPE 415	417 ILDLVDDHHGSTGGQTVRCTAEGTPLPDIEWMICKDI-KKCNNETSWTILANNVSNIITE 475	416 ILTHDRLVNGMLQCVAAGFFEFTIDWYFCPGTEQRCSVPVGPVDVQ 461	476 IHSRDRSTVEGRVTFAKVEETIAVRCLAKNLLGAENRELKLVAPT 520	462 IQNSSVSPFGKLVVYSTIDDSTFKHNGTVECRAYNDVGKSSASFNFAFKGNSKEQIHAHT 521	EIRWRVIESIS	522 LFTPLLIGEVIAAGLMCIFVMILTYKYLQKPMYEVQWKVVEEINGNNYVYIDPTQL 577	581 PYDSRWEFPRDGLVLGRVLGSGAFGKVVEGTAYGLSRSQPVMKVAVKMLKPTARSSEKQA 640	578 PYDHKWEFPRNRLSFGKTLGAGAFGKVVEATAYGLIKSDAAMTVAVKMLKPSAHLTEREA 637	641 LMSELKIMTHLGPHLNIVNLLGACTKSGPIYIITEYCFYGDLVNYLHKNRDSFLSHHPEK 700	638 LMSELKVLSYLGNHMNIVNLLGACTIGGPTLVITEYCCYGDLLNFLRRKRDSFICSKQED 697	701 PKKELDIFGLNPADESTRSYVILSFENNGDYMDMKQADTTQYVPMLERKEVSKYSDIQRS 760	698 HAEVALYKNLLHSKESSCNDSTNEYMDMKPGVSYVVPTKADKRKS 742	761 LYDRPASYKKKSMLDSEVKNLLSDDNSEGLTLLDLLSFTYQVARGMEFLASKNCVHRDLA 820	743 ARIGSYIERDVTPAIMEDDELALDLEDLLSFSYQVAKGMAFLASKNCIHRDLA 795	821 ARNVLLAQGKIVKICDFGLARDIMHDSNYVSKGSTFLPVKWMAPESIFDNLYTTLSDVWS 880	796 ARNILLTHGRITKICDFGLARDIKNDSNYVVKGNARLPVKWMAPESIFNCVYTFESDVWS 855	881 YGILLWEIFSLGGTPYPGMMVDSTFYNKIKSGYRMAKPDHATSEVYEIMVKCWNSEPEKR 940	856 YGIFLWELFSLGSSPYPGMPVDSKFYKMIKEGFRMLSPEHAPAEMYDIMKTCWDADPLKR 915	941 PSFYHLSEIVENLLPGQYKKSYEKIHLDFLKSDHPAVAR-MRVDS 984	916 PTFKQIVQLIEKQISESTNHIYSNLANCSPHRENPAVDHSVRINS 960	
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    protein-tyrosine kinase (EC 2.7.1.112), receptor type kit precursor N; Alternate names: tyrosine kinase receptor kit C; Species: Gallus gallus (chicken)
C; Species: Gallus gallus (chicken)
C; Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-UC; Accession: JN0677
R; Sasaki, E.; Okamura, H.; Chikamune, T.; Kanai, Y.; Watanabe, M.; NGene 128, 257-261, 1993
A; Title: Cloning and expression of the chicken c-kit proto-oncogene. A; Reference number: JN0677; MUID: 93292995; PMID: 7685729
A; Accession: JN0677
A; Molecule type: mRNA
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-RPV--KSGSYTDQDVTLSMLEDDELALD

l receptor; immunoglobulin homology; kinase-related transforming protein; (covalent) PID:9303 PIDN:BAA02506.1; 148 216 447 426 506 483 555 539 117 205 272 328 387 371 615 597 675 706 254 312 657 791 (Asn) 97 ---YTLTVPEATVKDSGDYECAARQATREVKEMKKVTISVHEKGFIEIKPTFSQLEAVN MDMKQADTTQYVPMLERKEVSKYSDIQRSLYDRPASYKKKSMLDSEVKNLLSDDNSEGLT MGTSHPAFLVLGCLLTGLSLILCQLSLPSILPNENEKVVQLNSSFSLRCFGESEVSWQYP --YIÇEATVKG--KKFQTİPFNVYAL-KATSELDL SKS--YELLKEGEEFEVTCIITD---VD----SSVKASWISYKSAIVTSKSRNLGDYG -KSKGSIVNSF --NMTFIPNPOKGIIIKNVORSFKGCYQCLAKHNGVEKISEHIFLNVRPVHKALPVITL LHEVKHFVVEVRAYPPPRIS-WLKNNLTLIENLTEITTDVEKIQEIRYRSKLKLIRAKEE DSGHYTIVAQNEDAVKSYTFELLTQVPSSILDLVDDHHGSTGGQTVRCTAEGTPLPDIEW MICKDI-KKCNNETSWTILANNVSNIITEIHSRDRSTVEGRVTFAKVEETIAVRCLAKNL YCFYGDLVNYLHKNRDSFL----SHHPFKPKKELDIFGLNPADESTRSYVILSFENNGDY MSEEESSDVEIRNEENNSGLFVTVLEVSSASAAHTGLYTCYYNHTQTEENELEG---RHI -APTLRSELTVAAAVLVLLVIVIISLIVLVVIWKOKPRY Gaps EMEALKTVYKSGETIVVTCAVFNNEVVDLQWTYPGEVKGKGITMLEEIKVPSIKLV--YFCPGTEQRCLDSPTISPMDVKVSYTNSSVPSFERILVESTVNASMFKSTGTICCEAcarbohydrate 960; 139; <MAT> Length Indels 1: signal sequence #status predicted <SIG>
luct: tyrosine kinase receptor #status predicted
lain: immunoglobulin homology <IMM>
lain: protein kinase homology <KIN>
jion: protein kinase ATP-binding motif
269,286,306,318,338,356,453,469/Binding site: ca NID:9303532 -WHIKNATIRDIGRYEC-25.9%; Score 1461.5; DB 1; imilarity 36.1%; Pred. No. 2.9e-56; ; Conservative 148; Mismatches 359; :ences: UNIPROT:Q08156; DDBJ:D13225; NII
il source: brain
r: macrophage colony-stimulating factor
iTP; autophosphorylation; glycoprotein; LGAENRELKLV--QGFNGTFTVGP -9

347 HQQWIYMNRT-PTNRGEDYVKSDNQSNIRYVNELRLTRLKGTEGGTYTFLVSNSDVSASV 406 TFELLTQVPSSILDLVDDHHGSTGGQTVRCTAEGTPLPDIEWMICKDIKKCNNETSWTIL	Oy 513 Oy 631 Oy 631 Oy 631 Oy 631 Oy 631 Oy 631 Oy 751 Ob 786 Oy 871 Ob 996	RESULT 12 TYUNKT PYOTOGINE Kinase (EC 2.7.1.112), receptor type kit precursor - human N;Alternate names: mast/stem cell growth factor receptor; tyrosine kinase receptor c-kit C;Species: Homo sapiens (man) C;Date: 31-Mar-1991 Hext change 09-Jul-2004 C;Accession: S01426; PC1015; A41815; B41815; C41815; 137948; I56954; I54336 R;Yarden, Y.; Kuang, W.J.; Yang-Peng, T.; Coussens, L.; Munemitsu, S.; Dull, T.J.; Chen, RNBO A;Title: Human proto-oncogene c-kit: a new cell surface receptor tyrosine kinase for an A;Reference number: S01426; MUID:88111521; PMID:2448137 A;Accession: S01426 A;Molecule type: mRNA A;Mesidues: 1-76 < YAR. A;Molecule type: mRNA A;Residues: 1-76 < YAR. A;Molecule type: DNA A;Reference number: P: Andre, C.; Galibert, F. Chinese Biochem. J. 7, 618-629, 1991 A;Title: Nuclectide sequece of two neighbouring fragments of human c-kit proto-oncogene A;Molecule type: DNA A;Mesidues: 12-73 < HUM> A;Molecule type: DNA A;Molecule type:
Qy 792 LLDLLSFTYQVARGMEFLASKNCVHRDLAARNVLLAQGKIVKICDFGLARDIMHDSNYVS 851 Db :	RESULT 11 A49814 Protein-tyrosine kinase (BC 2.7.1.112), receptor type kit precursor - rat Species: Rattus norvegicus (Norway rat) C;Becies: A49814; A49814; A49814; Baload C;Accession: A49814; A49814; MUD:9200344; PMID:1912577 A;Tulian-c; Characacterization of Wa mutant allele of rats: a 12-base deletion in tyrosine kin A;Tulian-c; Characacterization of Wa mutant allele of rats: a 12-base deletion in tyrosine kin A;Accession: A49814; MUD:9200344; PMID:1912577 A;Reference number: A49814; MUD:9200344; PMID:1912577 A;Residues: 1-978 crSu> A;Residues: 1-978 crSu> A;Residues: 1-978 crSu> A;Residues: Two lsoforms of rat c-kit receptor tyrosine kinase. A;Accession: Two lsoforms of rat c-kit receptor tyrosine kinase. A;Accession: S49088 A;Accession: S49088 A;Accession: S49088 A;Accession: S49088 A;Accession: S49088 A;Cossion: S4	Query Match 25.8%; Score 1458; DB 1; Length 978; Best Local Similarity 35.9%; Pred. No. 4.2e-56; Matches 365; Conservative 152; Mismatches 353; Indels 146; Gaps 30; QY 26 SLPSILPNENEKVQUINSERIKCFGESEVSWQPPMSEBSSDVEIRNEENBGLFYTVL 85; Db 35 SPRSIQPAGSELIVEAGDTIRLTCTDPAFVXMTFELLDVRIENKQSEWIR 84 QY 8 EVSSASAAHTGLYTCYYNHTQTEENELEGRHIYIYVDPDPDVAFVELGWTDYLVIVE 141 Db

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C; Species: Xenopus laevis (African clawed frog)
C; Species: Xenopus laevis (African clawed frog)
C; Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 09-Jul-2004
C; Accession: IS1703
R; Baker, C.V.; Sharpe, C.R.; Torpey, N.P.; Heasman, J.; Wylie, C.C.
Mech. Dev. 50, 217-228, 1995
A; Title: A Xenopus c-kit-related receptor tyrosine kinase expressed in migrating st A; Reference number: IS1703; MUID: 95344996; PMID: 7619732
A; Accession: IS1703
A; Cosserial in in argument and a colony-stimulating factor 1 receptor; immunoglobulin homo C; Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin homo C; Keywords: ATP
F; 575-915/Domain: protein kinase homology < KIN>
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                 25.1%; Score 1416.5; DB 2; 36.4%; Pred. No. 2.6e-54; ive 157; Mismatches 368;
F;583-591/Region: protein kinase ATP-binding motif
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macrophage colony-stimulating factor 1 receptor precursor - cat
N; Contains: procein-tyrosine kinase (EC 2.7.1.112) csflr/fms
C; Species: Felis silvestris catus (domestic cat)
C; Date: 31-Dec-1989 #sequence_revision 31-Dec-1989 #text_change 09-Jull
C; Accession. 31166
R; Woolford, J.; McAuliffe, A.; Rohrschneider, L.R.
Cell 55, 965-977, 1988
A; Title: Activation of the feline c-fms proto-oncogene: multiple alter:
A; Reference number: A31636; MUID:89077553; PMID:2849512
A; Rocession: A31636
A; Molecule type: mRNA
A; Residues: 1-980 < WOO>
A; Cross-references: UNIPROT:P13369; EMBL:X03663
C; Genetics: 1-980 < WOO>
A; Cross-references: UNIPROT:P13369; EMBL:X03663
C; Genetics: A; Gene: fms
C; Superfamily: macrophage colony-stimulating factor 1 receptor; immunocycle fic protein kinase
C; Superfamily: macrophage colony-stimulating factor 1 receptor #state
F; 24-590/Product: macrophage colony-stimulating factor 1 receptor #state
F; 24-590/Promain: signal sequence #status predicted <SIG>F; 24-590/Promain: immunoglobulin homology <IMM1>F; 217-280/Domain: immunoglobulin homology <IMM2>F; 217-280/Domain: immunoglobulin homology <IMM3>F; 217-280/Domain: immunoglobulin homology <IMM3>F; 217-280/Domain: immunoglobulin homology <IMM3>F; 217-280/Domain: immunoglobulin homology <IMM3>F; 217-280/Domain: inmunoglobulin homology <IMM3>F; 217-280/Domain: inmunoglobulin homology <IMM3>F; 217-280/Domain: inmunoglobulin homology <IMM3>F; 217-380/Domain: inmunoglobulin homology <IMM3-F; 218-380/Domain: inmunoglobulin homology <IMM3-F; 218-380/Domain: inmunoglobulin homology <IMM3-F; 218-380/Domain: inmunoglobulin homology <IMM3-F; 218-280/Domain: inmunoglobulin homology <IMM3-F; 218-280/Domain: inmunoglobulin homology <IMM3-F; 218-280/Domain: inmun
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359; Conser
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ò	479	RDRSTVEGRVTFAKVEETIAVRCLAKNLLGAENRELKLVAPT-LRSELTVAAAVLVL 534
Ωp	461	HE-VIVHSLLAIGTLEHNRTYECRAFNSVGNSSQTFWPISIGAHTQLPDELLFTPVLLTC 519
à	535	LVIVIISLIVLVVIWKQKPRYEIRWRVIESISPDGHEYIYVDPMQLPYDSRWEFPRD 591
Db	520	. [.
ò	592	GLVLGRVLGSGAFGKVVEGTAYGLSRSQPVMKVAVKMLKPTARSSEKQALMSELKIMTHL 651
Db	578	NLQFGKTLGAGAFGKVVEATAFGLGKEDAVLKVAVKMLKSTAHADEKEALMSELKIMSHL 637
οχ	652	GPHLNIVNLLGACTKSGPIYIITEYCFYGDLVNYLHKNRDSFLSHHPEKPKKELDIFGLN 711
QQ	638	GOHENIVNLLGACTHGGPVLVITEYCCYGDLLNFLRRQAEAMLGPSLSV-GOD 689
ò	712	PADESTRSYVILSFENNGDYMDMKQADTTQYVPMLERKEVSKYSDIQRSLYDRPA 766
Db	690	PEAGAGYKNIHLEKKYVRRDSDFSSQGVDTYVEMRPV 726
6	767	SYKKKSMLDSEVKNLLSDDNSEGLTLLDLLSFTYQVARGMEFLASKNCVHRDLAARNVLL 826
Db	727	STSSSNDSFSEEDLGKEDGRPLELRDLLHFSSQVAQGMAFLASKNCIHRDVAARNVLL 784
ò	827	AQGKIVKICDFGLARDIMHDSNYVSKGSTFLPVKWMAPESIFDNLYTTLSDVWSYGILLW 886
Db	785	TSGRVAKIGDFGLARDIMNDSNYIVKGNARLPVKWMAPESIFDCVYTVQSDVWSYGILLW 844
ò	887	EIFSLGGTPYPGMMVDSTFYNKIKSGYRMAKPDHATSEVYEIMVKCWNSEPEKRPSFYHL 946
Db	845	
ò	947	SEIVENLLPGQYKKSYEKIHLDFLKSDHPAVARMRVDSDNAYIGVTYKNEEDKLKDWEGG 1006
ΩÞ	905	CSLLQK916
٥٨	1001	LDEQRESADSGYIIPLPDIDPVPEEEDLGKRNRHSSQTSBESAIETGSSSSTFIKREDET 1066
Db	917	RVPNYTNLPSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS

Search completed: March 11, 2005, 07:49:16 Job time : 38.7367 secs

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GenCore
(c) 1993
       Copyright
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conds Se •• 07:17:30 2005, March 11, Run on:

updates/sec Search time 74.0692 Somithout alignments) 4925.234 Million cell

US-10-027-400-4 5766 1 MRLPGAMPALALKG score Title: Perfect

.. EQLPDSGCPAPRAEAED MRLPGAMPALALKGELLLLS. Sequence:

SFL 1106

BLOSUM62 Gapop 10. Scoring table

0 Gapext 0

residues 1396920 segs, 329844858 Searched: 1396920 hits satisfying chosen parameters Ŏ. Total number

2000000000 length: length: seq sed 0B 0B Minimum Maximum

100% 45 summaries Minimum Match 08 Maximum Match 10 Listing first 45 Post-processing:

Database

Published Applications AA:*

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19: /cgn2_6/ptodata/1/pubpaa/USIO_NEW_PUB.pep:*

19: /cgn2_6/ptodata/1/pubpaa/USIO_NEW_PUB.pep:*

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SUMMARIES

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	76	9	1106	4	-394-322A-	e 51, Ap
	76	о О	1106		9	36, App
	76	о О	1106		9-866-510-	22, App
	75	σ.	1106		19-866-510-1	16, App
	75	თ	1106		19-866-510-2	20, App
	75	9	1106		19-866-510-1	18, App
	67	8	1090		19-866-510-1	14, App
	2882	50.0	561	σ	US-09-866-510-24	Sequence 24, Appl
0	52.	0	1089		9-8	10, App
N	۲.	0	1089		92-60	2, Appl
	7,	C	1089		9-497-	90. App

equence 2, Appl	quence 36, App	equence 2, Appl	ence 50, Ap	equence 35, App	equence 168, Ap	equence 439, Ap	equence 1304, A	equence 4, Appl	equence 4, Appl	quence 8, Appl	equence 6, Appli	equence 165, Ap	equence 64, App	equence 32, App	equence 4, Appl	quence 708,	equence 2, Appl	equence 4, Appl	equence 3, Appl	equence 2, Appl	e 2, Appl	e 1, Appl	uence 10, App	uence 1570, A	equence 1571, A	equence 2335,	equence 6, Appl	quence 6, Appl	equence 6, Appl	quence 65, Ap	ednence
-09-866-510-2	US-09-955-363-3	4 US-10-027-400-	S US-10-394-322A-	S US-10-367-639-35	6 US-10-322-696-16	6 US-10-741-601-	7 US-10-741-600-13	0 US-09-961-403-	US-09-866-510-	US-09-866-51	US-09-866-510-6	6 US-10-322-696-	6 US-10-664-421-6	3 US-10-099-895-3	4 US-10-192-867-	5 US-10-295-027	S US-10-457-954-	S US-10-637-356-	US-10-637-356-	4 US-10-192-867-	5 US-10-637-356-	S US-10-637-356-	US-09-944-807-1	US-10-741-600-157	7 US-10-741-600	6 US-10-408-765A-23	US-09-939-754-	US-08-939-8	US-09-939-833-	5 US-10-394-322A	5 US-10-402-36
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ALIGNMENTS

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WESULT 1

US-10-07-400-4

Sequence 4, Application US/10027400

Sequence 4, Application US/10027400

Publication No. US20030017535A1

GENERAL INFORMATION:

SECOBEDO, Jaime A.

TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTORS

NUMBER OF SEQUENCES: 1

ADDRESSEE: Townsend and Townsend and Crew

STREET: One Market, Steuart Street Tower, 20th Floor

CITY: San Francisco

STATE: California

COUNTRY: USA

ZIP: 94105

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PSECHILIR Release #1.0, Version #1.30

CURRING DATE: 19-Dec-2001

CLASSIFICATION NUMBER: US/00/7,400

FILING DATE: 05-UN-1995

APPLICATION NUMBER: US 07/151,414

FILING DATE: 02-FEB-1988

ATTORNEY ARENDALION:

NAME: DAW Karan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 2307K-267-2-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2400
RESULT
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1080
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           960
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Bell, Lillian A.
Kindsvogel Ph.D., Wayne R.
Kindsvogel Ph.D., Wayne R.
AND BIOLOGICALLY ACTIVE DIMERIZED POLYPEPTIDE
FUSIONS
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSE: Seed and Berry
STREET: 6300 Columbia Center
CITY: Seattle
                                                                                   LLGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRSPLDTSSVLYTAVQPNEGDND
                      1 MRLPGAMPALALKGELLLLSLLLLEPQISQGLVVTPPGPELVLNVSSTFVLTCSGSAPV
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                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 07/634,510
FILING DATE: <Unknown>
APPLICATION NUMBER: US 07/347,291
FILING DATE: 02-MAY-1989
ATTORNEY/AGENT INFORMATION:
NAME: Maki J.D., David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 990008.446C3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
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                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/955,363
FILING DATE: 18-Sep-2001
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 5762;
Pred. No. 0;
1; Mismatches
                                                                                                                          1106
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MOLECULE TYPE: protein
;
SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-955-363-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-622-4900
TELEFAX: 206-682-6031
TELEX: 3723836
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1106 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                        EPEPELEQLPDSGCPAPRAEAEDSFL
                                                                                                                                                                   RESULT 2
US-09-955-363-2
; Sequence 2, Application US/09955363
; Patent No. US20020173621A1
; GENERAL INFORMATION:
. APPLICANT: Sledziewski Ph.D.,
Bell, Lillian A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 99.9%;
Matches 1105; Conservative
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Pred. No. 0;
; Mismatches
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TELEFAX: 415/326-2422

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 1106 amino acid

TYPE: amino acid

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID

US-10-027-400-4
                              acid
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Similarity 100.0%;
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DB
                  US-10-394-322A-51
; Sequence 51, Application US/10394322A
; Publication No. US20030232391A1
; GENERAL INFORMATION:
; APPLICANT: SUNESIS PHARMACEUTICALS, INC.
; APPLICANT: Prescott, John C.
; TITLE OF INVENTION: IDENTIFICATION OF KINASE; FILE REFERENCE: 39750-0006 US
; CURRENT APPLICATION NUMBER: US/10/394,322A
; CURRENT FILING DATE: 2003-03-20
; PRIOR FILING DATE: 2002-03-21
; NUMBER OF SEQ ID NOS: 70
; SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                            Score 5762;
Pred. No. 0;
1; Mismatches
EPEPELEQLPDSGCPAPRAEAEDSFL
                                                                                                                                      1;
                                                                                                                            Query Match
Best Local Similarity 99.9%
Matches 1105; Conservative
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US-10-394-322A-51
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LENGTH: 1106
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	661 HLNVVNLLGACTKGGPIYIITEYCRYGDLVDYLHRNKHTFLQHHSDKRRPPSAELYSNAL 7 721 PVGLPLPSHVSLTGESDGGYMDMSKDESVDYVPMLDMKGDVKYADIESSNYMAPYDNYVP 7	721 PVGLPLPSHVSLTGESDGGYMDMSKDESVDYVPMLDMKGDVKYADIESSNYMAPYDNYVP 78 781 SAPERTCRATLINESPVLSYMDLVGFSYQVANGMEFLASKNCVHRDLAARNVLICEGKLV 84 [QY 841 KICDFGLARDIMRDSNYISKGSTFLPLKWMAPESIFNSLYTTLSDVWSFGILLWEIFTLG 900	901 GTPYPELPMNEQFYNAIKRGYRMAQPAHASDEIYEIMQKCWEEKFEIRPPFSQLVLLLER 96	961 LLGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRSPLDTSSVLYTAVQPNEGDND 1	1021 YIIPLPDPKPEVADEGPLEGSPSLASSTLNEVNTSSTISCDSPLEPQDEPEPPCLELOV 108			639	, APPLICANT: Cornell Research Foundation, Inc. ; APPLICANT: Edelberg, Jay M. ; APPLICANT: Rafii, Shahin ; APPLICANT: Hong, Mun K.	APPLICANT: Lanza, Robert P. APPLICANT: West, Michael D. TITLE OF INVENTION: Endothelial Precurso: FILE REFERENCE: 1676.004US1	CURRENT AFFLICATION NUMBER: US/10/367,639 CURRENT FILING DATE: 2003-02-13 NUMBER OF SEQ ID NOS: 36 SOFTWARE: FastSEQ for Windows Version 4.0	; SEQ ID NO 36 ; LENGTH: 1106 ; TYPE: PRT ; ORGANISM: Homo sapiens	LU-38/-839-38 Query Match Best Local Similarity 99.9%; Pred. No. 0;	1 MRLPGAMPALALKGELLLLSLLLL MRLPGAMPALALKGELLLLSLLLL MRLPGAMPALALKGELLLLSLLLLL MRLPGAMPALALKGELLLLSLLLLL	61 VWERMSQEPPQEMAKAQDGTFSSVLTLTNLTGLDTGEYFCTH 	Oy 121 PDPTVGFLPNDAEELFIFLTEITIPCRVTDPQLVVTLHEKKGDVALPVPYDHQRGFS 180

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APPLICANT: KAZLAUSKAS, ANDRIUS
APPLICANT: KAZLAUSKAS, ANDRIUS
APPLICANT: IKUNO, YASUSHI
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING FIBROTIC DISEASES
FILE REFERENCE: ERM-104.01
CURRENT APPLICATION NUMBER: US/09/866,510
CURRENT FILING DATE: 2001-05-25
PRIOR APPLICATION NUMBER: 60/250,747
PRIOR FILING DATE: 2000-12-01
PRIOR FILING DATE: 2001-05-07
NUMBER OF SEQ ID NOS: 33
SOFTWARE: Patentin Ver. 2.1
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PRIOR APPLICATION NUMBER: 60/250,747
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PRIOR FILING DATE: 2001-05-07
NUMBER OF SEQ ID NOS: 33
SOFTWARE: PatentIn Ver. 2.1
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US-09-866-510-20
i Sequence 20, Application US/09866510
i Patent No. US20020111304A1
i GENERAL INFORMATION:
    APPLICANT: KAZLAUSKAS, ANDRIUS
i APPLICANT: KAZLAUSKAS, ANDRIUS
i TITLE OF INVENTION: METHODS AND COMPOSITIONS FOF
i FILE REFERENCE: ERM-104.01
i CURRENT APPLICATION NUMBER: US/09/866,510
i CURRENT APPLICATION NUMBER: 60/250,747
pRIOR FILING DATE: 2000-12-01
pRIOR FILING DATE: 2001-05-07
i PRIOR FILING DATE: 2001-05-07
i NUMBER OF SEQ ID NOS: 33
i SOFTWARE: Patentin Ver. 2.1
i SEQ ID NO 20
i LENGTH: 1106
i TYPE: PRT
i ORGANISM: Homo sapiens
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Score 5757; DB 9, Pred. No. 6.2e-318; Mismatches (
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; Sequence 14, Application US/09866510
; Patent No. US20020111304A1
; GENERAL INFORMATION:
; APPLICANT: KAZLAUSKAS, ANDRIÚS
; APPLICANT: IKUNO, YASUSHI
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOI
; FILE REFERENCE: ERM-104.01
; CURRENT APPLICATION NUMBER: US/09/866,510
; CURRENT FILING DATE: 2001-05-25
; PRIOR FILING DATE: 2000-12-01
; PRIOR FILING DATE: 2001-05-07
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Patentin Ver. 2.1
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Pred. No. 1.4e-
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Best Local Similarity 99.9%;
Matches 1089; Conservative
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US-09-866-510-18
Sequence 18, Application US/09866510
Patent No. US20020111304A1
GENERAL INFORMATION:
APPLICANT: KAZLAUSKAS, ANDRIUS
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING FIBROTIC
FILE REFERENCE: ERM-104.01
CURRENT APPLICATION NUMBER: US/09/866,510
CURRENT FILING DATE: 2001-05-25
PRIOR APPLICATION NUMBER: 60/250,747
PRIOR APPLICATION NUMBER: 60/289,103
PRIOR FILING DATE: 2001-05-07
NUMBER OF SEQ ID NOS: 33
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 18
LENGTH: 1106
TYPE: PRT
CORGANISM: Home sapiens
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Pred. No. 6.2e-318;
Mismatches 1
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Best Local Similarity 99.8%;
Matches 1104; Conservative
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Pred. No. 2.2e-155
; Mismatches 0
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   Sequence 24, Application US/09866510;
Sequence 24, Application US/09866510;
Patent No. US20020111304A1;
GENERAL INFORMATION:
APPLICANT: KAZLAUSKAS, ANDRIUS;
APPLICANT: IKUNO, YASUSHI
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOI FILE REFERENCE: ERM-104.01;
CURRENT APPLICATION NUMBER: US/09/866,510;
CURRENT FILING DATE: 2001-05-25;
PRIOR APPLICATION NUMBER: 60/250,747;
PRIOR FILING DATE: 2001-12-01;
PRIOR FILING DATE: 2001-05-07;
NUMBER OF SEQ ID NOS: 33;
SOFTWARE: Patentin Ver. 2.1;
SEQ ID NO 24;
LENGTH: 561;
TYPE: PRT
CORGANISM: Homo sapiens
US-09-866-510-24
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S-09-866-510-10
Sequence 10, Application US/09866510
Patent No. US20020111304A1
GENERAL INFORMATION:
APPLICANT: KAZLAUSKAS, ANDRIUS
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               TREATING
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Pred. No. 5.6e-125;
5; Mismatches 341;
               FOR
               COMPOSITIONS
TITLE OF INVENTION: METHODS AND COMPOSITIONS; FILE REFERENCE: ERM-104.01; CURRENT APPLICATION NUMBER: US/09/866,510; CURRENT FILING DATE: 2001-05-25; PRIOR APPLICATION NUMBER: 60/250,747; PRIOR FILING DATE: 2000-12-01; PRIOR APPLICATION NUMBER: 60/289,103; PRIOR FILING DATE: 2001-05-07; NUMBER OF SEQ ID NOS: 33; SOFTWARE: Patentin Ver. 2.1
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Best Local Similarity 44.0%; Pr
Matches 503; Conservative 196;
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LENGTH: 1089
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40.8%; Score 2351.5; DB 9;
Best Local Similarity 44.0%; Pred. No. 6.4e-125;
Matches 503; Conservative 196; Mismatches 341;
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; Patent No. US20020055129A1
; GENERAL INFORMATION:
; APPLICANT: Matsui, Toshimitsu
APPLICANT: Aaronson, Stuart A.
; APPLICANT: Pierce, Jacalyn H.
; TITLE OF INVENTION: Antibodies for the Alpha; FILE REFERENCE: 14014.0266U2
; CURRENT APPLICATION NUMBER: US/09/769,987
; CURRENT FILING DATE: 2001-10-12
; PRIOR APPLICATION NUMBER: US 08/460,656
; PRIOR FILING DATE: 1995-06-02
; PRIOR FILING DATE: 1995-05-11
; PRIOR FILING DATE: 1992-07-20
; PRIOR FILING DATE: 1989-02-09
; NUMBER OF SEQ ID NOS: 2
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; Sequence 90, Application US/09919497
; Patent No. US20020106662A1
; GENERAL INFORMATION:
; APPLICANT: Mutter, George L.
; TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF;
; FILE REFERENCE: B0801/7225
; CURRENT APPLICATION NUMBER: US/09/919,497
; CURRENT FILING DATE: 2001-07-31
; PRIOR APPLICATION NUMBER: US 60/221,735
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 100
; SOFTWARE: PatentIn version 3.0 196; y Match Local Similarity 44.0%; hes 503; Conservative 19 | : | : | | | EIHSRDRSTVEGRVTF-; SEQ ID NO 90 ; LENGTH: 1089 ; TYPE: PRT ; ORGANISM: Homo sapiens US-09-919-497-90 297 180 99 62 121 181 240 ø 240 296 357 356 415 475 520 587 580 647 640 707 Query Match Best Local Matches ð

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US-09-955-363-36
; Sequence 36, Application US/09955363
; Patent No. US20020173621A1
; GENERAL INFORMATION:
; APPLICANT: Sledziewski Ph.D., Ar
; APPLICANT: Bell, Lillian A.
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                   SFLASKNCVH
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Patent No. US20020111304A1

GENERAL INFORMATION:
APPLICANT: KAZLAUSKAS, ANDRIUS
APPLICANT: IKUNO, YASUSHI
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING FIBRA
FILE REFERENCE: ERM-104.01

CURRENT APPLICATION NUMBER: US/09/866,510

CURRENT FILING DATE: 2001-05-25

PRIOR FILING DATE: 2000-12-01
PRIOR FILING DATE: 2000-12-01
                                                                                                700 K---PKKELDIFGLNPADESTRSYVILSFENNGDYMDMKQADTTQYVPMLE
                 IESSNYMAPYDNYVPSAPERTCRATLINE-SPVLSYMDLVGFSYQVANGME
                             817 RDLAARNVLLAQGKIVKICDFGLARDIMHDSNYVSKGSTFLPVKWMAPESI
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Pred. No. 6.4e-125;
5; Mismatches 341;
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PRIOR APPLICATION NUMBER: 60/289,103
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196;
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larity 44.0%;
Conservative 196
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Matches 503; Conser
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Hel Ph.D., Wayne R.
METHODS OF PRODUCING SECRETED RECEPTOR ANALOGS
AND BIOLOGICALLY ACTIVE DIMERIZED POLYPEPTIDE
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Pred. No. 6.4e-125;
6; Mismatches 341;
                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION NUMBER: 31,392

REFERENCE/DOCKET NUMBER: 990008.446C3

TELEPHONE: 206-622-4900

TELEFAX: 206-682-6031

TELEX: 377300
                                                                                                                         COUNTRY: USA
ZIP: 98104-7092
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.24
                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 07/634,510
FILING DATE: <Unknown>
APPLICATION NUMBER: US 07/347,291
FILING DATE: 02-MAY-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/955,363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO: 36
                                                                ADDRESSEE: Seed and Berry
STREET: 6300 Columbia Center
CITY: Seattle
STATE: WA
                                                                                                                                                                                                                                                       <Unknown>
                                                                                                                                                                                                                                           FILING DATE: 18-Sep-2001
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                                      FUSIONS
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REGISTRATION NUMBER:
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larity 44.0%;
Conservative 196
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TYPE: protein
DESCRIPTION: SI
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                                                                                                                                                                                                                                                      CLASSIFICATION: <
 Kindsvogel
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            INVENTION:
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             TITLE OF
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                 KRRPPSAELYSNAL-PVGLPLPSHVSLTGESDGGYMDMSKDESVDYVPMLDMKGDVKYAD
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Search completed: March 11, 2005, 07:53:04 Job time : 78.0692 secs

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Seconds Search time 32.2478 S. (without alignments) 2560.230 Million cell 07:10:35 2005, March 11, Run on:

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Title: Perfect

US-10-027-400-4 5766 1 MRLPGAMPALALKGELLLLS... score: Sequence:

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74649064 residues 513545 segs, Searched:

satisfying chosen parameters: hits o F Total number

length: 0 length: 2000000000 seq Minimum DB Maximum DB

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Issued_Patents_AA:*

'cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
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'cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
'cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:* 4 0 M 4 M 0 Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

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US-01-168-917-2

i Sequence 2, Application US/08168917

i Sequence 2, Application US/08168917

i Patent No. 568572

i GENERAL INFORMATION:

APPLICANT: Molf, David

APPLICANT: Tomlinson, James E.

APPLICANT: Giese, Neill A.

APPLICANT: Escobedo, Jaime A.

APPLICANT: Escobedo, Jaime A.

APPLICANT: Escobedo, Jaime A.

APPLICANT: Escobedo, Jaime A.

APPLICANT: Escobedo, Jaime A.

APPLICANT: BAPLICANT: Escobedo, Jaime A.

APPLICANT: BAPLICANT: Escobedo, Jaime A.

APPLICANT: Scobedo, Jaime A.

APPLICANT: Scobedo, Jaime A.

APPLICANT: Submission: DOMAINS OF EXTRACELLULAR REGION OF HUMAN

TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR POLYPEPTIDES

NUMBER OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:

ADDRESSES: TOWNSEND and TOWNSEND

STREET: Steaart Street Tower, 20th Floor \ One Market

STREET: Plaza

CUITY: San Francisco

STATE: California

COUNTRY: US

ZIP: 94105

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/168,917
FILING DATE:
CLASSIFICATION DATA:
APPLICATION NUMBER: US/07/650,793
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12418-14
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REGISTRATION NUMBER: 34,090
REFERENCE/DOCKET NUMBER: 1241
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2400
TELEPAX: (415) 326-2422
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHARACTERISTICS: 1106 amino acids
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RESULT
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Length 1106;

DB 1;

Score 5766;

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Query Match

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BESULT 2
US-08-460-510-2
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Patent No. 5872218
GENERAL INFORMATION:
APPLICANT: Wolf, David
APPLICANT: Fretto, Larry J.
APPLICANT: Giese, Neill A.
APPLICANT: Williams, Lewis T.
TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR POLYPEPTIDES NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND and TOWNSEND and CREW
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Pred. No. 0;
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
                                 EPEPELEQLPDSGCPAPRAEAEDSFL
                                                     MBER: US/08/460,51
02-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 0124
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2422
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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Matches 1106; Conser
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COMPUTER READABLE MEDIUM TYPE: F1
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i Sequence 2, Application US/08460490
; Sequence 2, Application US/08460490
; Patent No. 5891652
; GENERAL INFORMATION:
; APPLICANT: Wolf, David
; APPLICANT: Fretto, Larry J.
; APPLICANT: Fretto, Larry J.
; APPLICANT: Escobedo, Jaime A.
; APPLICANT: Williams, Lewis T.
; TITLE OF INVENTION: DOMAINS OF EXTRACELLULAR REGION OF HUMAN
; TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR POLYPEPTIDES
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Pred. No. 0;
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R: 012418-001420
                        and
                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,490
FILING DATE: 02-JUN-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Dow, Karen B.
REGISTRATION NUMBER: 012418-001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2400
TELEFAX: (415) 326-2422
INFORMATION FOR SEQ ID NO: 2:
                        TOWNSEND
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NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND and TOW
STREET: One Market Plaza, S
CITY: San Francisco
STATE: California
COUNTRY: US
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Best Local Similarity 100.0%;
Matches 1106; Conservative
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                                                        GROWTH FACTOR RECEPTOR
KICDFGLARDIMRDSNYISKGSTFLPLKWMAPESIFNSLYTTLSDVWSFG:
                                                                                                                                                                                                                                                                20th Floor
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
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APPLICATION NUMBER: US/08/462,728
FILING DATE: 05-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
NAME: Dow, Karen B.
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Pred. No. 0;
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REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 2307:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2400
TELEFAX: 415/326-2422
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 1106 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-462-728-4
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Best Local Similarity 100.0%;
Matches 1106; Conservative
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APPLICANT: ESCOBEDO, Jaime A.
TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew STREET: One Market, Steuart Street Tower, 20th Floor
KICDFGLARDIMRDSNYISKGSTFLPLKWMAPESIFNSLYTTLSDVWSFGI
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Pred. No. 0;
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/461,917
FILING DATE: 05-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                MBER: US 07/309,322
10-FEB-1989
                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2400
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LENGTH: 1106 amino acids
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CITY: San Francisco
STATE: California
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FILING DATE: 10-FE
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GY: linear
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Matches 1106; Conser
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Patent No. 6372438
GENERAL INFORMATION
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APPLICANT: WILLIAMS, Lewis T.
ESCOBEDO, Jaime A.
TITLE OF INVENTION: PLATELET-DERIVED GR
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend a
STREET: One Market, Steuart Street
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94105
COMPUTER READABLE FORM:
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Patent No. 6642022
GENERAL INFORMATION:
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US-08-464-436-4
Sequence 4
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                                                    Patent No. 6514723
GENERAL INFORMATION:
APPLICANT: WILLIAMS, Lewis T.
APPLICANT: ESCOBEDO, Jaime A.
TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTOR NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110
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Pred. No. 0;
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                            29,684
R: 2307K-267-2-
                                                                                                                                                                                              ZIP: 94105

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Very
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/464,436
FILING DATE: 05-JUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 2307K-267-;
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2422
                                                                                                                                       ADDRESSEE: Townsend and Townsend ar
STREET: One Market, Steuart Street
CITY: San Francisco
STATE: California
COUNTRY: USA
                                              4, Application US/08464436
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SEQUENCE CHARACTERISTICS
LENGTH: 1106 amino acid
TYPE: amino acid
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Best Local Similarity
Matches 1106; Conser
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US-08-464-436-4
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                                   08-464-436-4
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ATTORNEY/AGENT INFORMATION:
NAME: Ching, Edwin P.
REGISTRATION NUMBER: 34,090
REFERENCE/DOCKET NUMBER: 12418-14
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2400
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ZIP: 941
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                                            APPLICATION NUMBER: US/08/464,436
FILING DATE: 05-Jun-1995
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
APPLICATION NUMBER: US 07/151,414
FILING DATE: 02-FEB-1988
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                             Score 5766;
Pred. No. 0;
; Mismatches
                             0
                      -DOS
    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-D
SOFTWARE: PatentIn Release #1
                                                                                                                          NAME: Dow, Karen B.
REGISTRATION NUMBER: 29,684
REFERENCE/DOCKET NUMBER: 2307
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/326-2400
TELEFAX: 415/326-2422
ORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                  LENGTH: 1107 amino acids
TYPE: amino acid
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ
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.Conservative 0;
                                       CURRENT APPLICATION DATA:
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Best Local Similarity
Matches 1106; Conser
                                                                                                                                                                                 INFORMATION
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GENERAL INFORMATION:
APPLICANT: Wolf, David
APPLICANT: Tomlinson, James E.
APPLICANT: Fretto, Larry J.
APPLICANT: Giese, Neill A.
APPLICANT: Escobedo, Jaime A.
APPLICANT: Williams, Lewis T.
TITLE OF INVENTION: DOMAINS OF EXTRACELLULAR RECTIONER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND and TOWNSEND
STREET: Steuart Street Tower, 20th Floor \ One STREET: Plaza
CITY: San Francisco
STATE: California
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00730
FILING DATE: 19920128
CLASSIFICATION: 435
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; TOPOLOGY: 1;
; MOLECULE TYPE:
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                                          Score 5766;
Pred. No. 0;
; Mismatches
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; TELEFAX: (415) 326-2422
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1106 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
PCT-US92-00730-2
                                          Query Match
Best Local Similarity 100.0%;
Matches 1106; Conservative (
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                             GTPYPELPMNEQFYNAIKRGYRMAQPAHASDEIYEIMQKCWEEKFEIRPPFSQLVLLLER
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GENERAL INFORMATION:
APPLICANT: Williams, Lewis T.
APPLICANT: Escobedo, Jaimé A.
TITLE OF INVENTION: PLATELET-DERIVED GROWTH FACTOR RECEPTORS NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND and TOWNSEND STREET: Steuart Street Tower, 20th Floor CITY: San Francisco STATE: California
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1106;
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Pred. No. 0;
; Mismatches
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ZIP: 94105

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PatentIn Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/00862
FILING DATE: 19920131
CLASSIFICATION DATA:
APPLICATION NUMBER: US 07/151,141
FILING DATE: 02-FEB-1988
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/309,322
FILING DATE: 10-FEB-1989
ATTORNEY/AGENT INFORMATION:
NAME: Ching, Edwin P.
REGISTRATION NUMBER: 34,090
REFERENCE/DOCKET NUMBER: 2307U-267-2
TELEPHONE: (415) 326-2420
TELEPHONE: (415) 326-2422
THELEPARATION FOR SEC 17 NO. 2.
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LENGTH: 1106 amino acids
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Best Local Similarity
Matches 1106; Conser
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RESULT 10^{'1}. US-08-180-195-2 ; Sequence 2, Application US/081801

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GENERAL INCRMATION:
APPLICANT: Sledziewski Ph.D., Andrzej Z
APPLICANT: Sledziewski Ph.D., Wayne R.
APPLICANT: Sledziewski Ph.D., Wayne R.
TITLE OF INVENTION: AND BIOLOGICALLY ACTIVE DIMERIZED POLYPEPTIDE
TITLE OF INVENTION: AND BIOLOGICALLY ACTIVE DIMERIZED POLYPEPTIDE
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TITLE OF INVENTION: AND BIOLOGICALLY ACTIVE DIMERIZED POLYPEPTIDE
TITLE OF INVENTION: AND BIOLOGICALLY ACTIVE DIMERIZED POLYPERIZES
TORRETS: Seed and Berry
STREET: 6300 Columbia Center
CITY: Seattle Seed and Berry
COMPUTER: WA
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COMPUTER: BAD ACTIVE Release #1.24
COMPUTER: Ploppy disk
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Best Local Similarity 99.9%;
Matches 1105; Conservative
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SEQUENCE CHARACTERISTICS:
LENGTH: 1106 amino acids
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Pred. No. 0;
1; Mismatches
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,329
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 990008.44(
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-622-4900
                                                                                                            TELERA: 206-682-6031
TELEX: 3723836
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1106 amino acids
TYPE: amino acids
TOPOLOGY: linear
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Best Local Similarity 99.9%;
Matches 1105; Conservative
                                                                                                                                                            ; MOLECULE TYPE: protein US-08-477-329-2
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US-08-477-329-2
; Sequence 2, Application US/08477329
; Patent No. 5750375
; GENERAL INFORMATION:
; APPLICANT: Sledziewski Ph.D., Andrzej Z
APPLICANT: Ridsvogel Ph.D., Wayne R.
TITLE OF INVENTION: METHODS OF PRODUCING
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed and Berry
STREET: 6300 Columbia Center, 701 Fift
CITY: Seattle
STATE: WA
; COUNTRY: USA
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Pred. No. 0;
1; Mismatches
                                   99.9%;
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Local Similarity
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; Sequence 2, Application US/08475458
; Patent No. 5843725
; GENERAL INFORMATION:
    APPLICANT: Sledziewski Ph.D., Andrzej Z
    APPLICANT: Bell, Lillian A.
    APPLICANT: Bell, Lillian
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/475,458
FILING DATE: 06-JUN-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 990008.446D5
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-622-4900
TELEFAX: 206-682-6031
TELEX: 3723836
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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ZIP: 98104-7092
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Db 961 LLGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRSPLDTSSVLYTAVQPNEGDND 1020 Qy 1021 YIIPLPDPKPEVADEGPLEGSPSLASSTLNEVNTSSTISCDSPLEPQDEPEPPQLELQV 1080 LO21 YIIPLPDPKPEVADEGPLEGSPSLASSTLNEVNTSSTISCDSPLEPQDEPEPPQLELQV 1080 Qy 1081 EPEPELEQLPDSGCPAPRAEAEDSFL 1106 LO81 EPEPELEQLPDSGCPAPRAEAEDSFL 1106 Db 1081 EPEPELEQLPDSGCPAPRAEAEDSFL 1106	RESULTION: 105-66-960-400-2 105-66-960-400-3	amino acid LOGY: linear LE TYPE: protein 00-2 ch 99.9% 1 Similarity 99.9%	1 MRLPGAMPALALKGELLLLSLLLLLEPQISQGLVVTPPGPELVLNVSSTFVLTCSGSAPV 60

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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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; Sequence 2, Application US/09583210
; Patent No. 6291646
; GENERAL INFORMATION:
APPLICANT: Sledziewski Ph.D., And APPLICANT: Kindsvogel Ph.D., Wayy TITLE OF INVENTION: METHODS OF PLITLE OF INVENTION: FUSIONS
INUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Seed and Berry STREET: 6300 Columbia Center CITY: Seattle
STATE: WA
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                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 31,392
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-622-4900
TELEFAX: 206-682-600
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Pred. No. 0
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APPLICATION NUMBER: US 07/634,510
FILING DATE: 27-DEC-1990
APPLICATION NUMBER: US 07/146,877
FILING DATE: 22-JAN-1988
APPLICATION NUMBER: US 07/347,291
FILING DATE: 02-MAY-1989
ATTORNEY/AGENT INFORMATION:
NAME: Maki J.D., David J.
REGISTRATION NUMBER: 31,392
                                                                        COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/rr
FILING DATE: 30-vr
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JMBER: US/09/583,459A
30-MAY-2000
                                        3: Seed and Berry
6300 Columbia Center
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TELEX: 3723836
INFORMATION FOR SEQ ID NO:
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TITLE OF INVENTION: ANI
TITLE OF INVENTION: FUR
NUMBER OF SEQUENCES: 30
CORRESPONDENCE ADDRESS:
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Matches 1105; Conser
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                                        ADDRESSEE:
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; Pred. No. 0;
1; Mismatches
SOFTWARE: Patentin Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/583,210
FILING DATE: 30-MAY-2000
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/634,510
FILING DATE: 27-DEC-1990
APPLICATION NUMBER: US 07/146,877
FILING DATE: 22-JAN-1988
APPLICATION NUMBER: US 07/347,291
FILING DATE: 02-MAY-1989
ATTORNEY/AGENT INFORMATION:
NAME: Maki J.D., David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 990008.446C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-682-6031
                                                                                                                                                       TELEX: 3723836
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1106 amino acids
TYPE: amino acids
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Best Local Similarity 99.9%;
Matches 1105; Conservative
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; MOLECULE TYPE:
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Job time: 37.2478 secs
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5.1.6
Compugen Ltd.
version
- 2005
GenCore (c) 1993
        Copyright
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- protein search, using sw model OM protein

conds Se 04:13:19 2005, March 11, Run on:

updates/sec Search time 129.495 S (without alignments) 3303.265 Million cell

Title: Perfect score:

... EQLPDSGCPAPRAEAEDSFL US-10-027-400-4 5766 1 MRLPGAMPALALKGELLLLS... ٠,٠ Sequence:

1106

Gapext BLOSUM62 Gapop 10.0 Scoring table:

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2105692 hits satisfying chosen parameters: of o Total number

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seq length: 0 seq length: 2000000000 Minimum DB Maximum DB

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Geneseq_16Dec04:*

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SUMMARIES

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ALIGNMENTS

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Platelet derived growth factor receptor (see corresp. AAN90355). Used in the invention to make analogues that are secreted (pref. Ile-29 - Met-441, and Ile-29 - Lys-531; see specification for details). These analogues are easily purified, produced in large quantities recombinantly, used to produce antibodies, to screen ligands as imaging agents, as (ant-) agonists, or therapeutically for atherosclerosis and wound healing, and assays. (Updated on 25-MAR-2003 to correct PI field.)
                                                                                                                                    Platelet derived growth factor receptor; human; ligand binding receptor analogues; isoforms; assays; antibodies; athersclerosis; wound healing; peptide dimer; cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                      c analogues e.g. PDGF receptor or with therapeutic agents.
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                        AAP90127 standard; protein;
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RESULT 1
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Length 1106; DB 1; Score 5762; 186.66

Sequence 1106 AA;

Query Match

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YIIPLPDPKPEVADEGPLEGSPSLASSTLNEVNTSSTISCDSPLEPQDEPEPPQLELQV 1080
                                                                                                                                                                                                                                                                                                                                                          The amino acid sequence (AAR99690) of human platelet-derived growth factor receptor (PDGF-R) was deduced from a cDNA clone (AAT34552) isolated from a human diploid dermal fibroblast library. The cDNA can be used in novel constructs that allow the prodn. of secreted biologically active PDGF-R analogues. This may comprise linking a sequence coding for PDGR-R, or the ligand- binding domain of the PDGF-R extracellular region, to a protein secretion signal (e.g. SUC2) and promoter, and expression in transformed host cells, esp. Saccharomyces cerevisiae. The secreted PDGF-R analogues are used in ligand screening procedures, to screen for (ant) agonists, and in diagnostic assays. (Updated on 25-MAR-2003 to correct PR field.)
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growth factor receptor analogues - useful for systematic designing a
novel (ant)agonists.
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Pred. No. 0;
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Humanised baculovirus; cytostatic; gene therapy; baculovirus; prostate cancer; platelet-derived growth factor receptor beta; chromosome 5.

2002WO-GB003791

15-AUG-2002;

27-FEB-2003

WO2003016540-A2

sapiens

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                                                                                                                                                                                                                                                                                    The present invention describes a humanised baculovirus (I) which comprises a modified baculovirus genome having a nucleic acid molecule encoding a therapeutic agent and a polypeptide which functions to target the baculovirus to at least one cell type. Also described is a pharmaceutical composition comprising (I). (I) has cytostatic activity, and can be used in gene therapy. The baculovirus is useful in the manufacture of a medicament for the treatment of cancer, particularly prostate cancer. The present sequence represents the human plateletderived growth factor receptor beta protein, which is specified in the exemplification of the present invention. N.B. The present sequence is not given in the specification but is referred to in Claim 33 as Genbank accession number NM_002609
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The present invention relates to a method of treating a vascular condition in a mammal, which comprises administering to the mammal a therapeutic amount of endothelial precursor cells. The method and cells of the invention are useful for treating a vascular condition, e.g. myocardial infarction, atherosclerosis, ischaemia, tachycardia, congestive heart failure, peripheral vasculature disorder, hypertension, stroke, thrombosis, arrhythmia or tachycardia. The present sequence is a protein shown in the exemplification of the invention
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                                         The present invention relates to a method for identifying a ligand (L), which binds to an inactive conformation of target protein kinase (T). The method involves contacting inactive conformation of (T), which contains or is modified to contain a reactive group at or near a binding site of interest, with one or more ligand candidates capable of covalently bonding to the reactive group thus forming a kinase-(L) conjugate (C). The method is useful for identifying protein kinase inhibitors that preferentially bind to inactive conformation of a target protein kinase. The present sequence is a protein kinase which may be modified via an amino acid substitution, for use in the method of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated cancer-associated polynucleotides and polypeptides useful for diagnosing, preventing or treating cancers, especially lymphoma and leukemia, or in screening for agents that modulate cancer.
                                           LLWEIFTLG
                                                                                                                                 LIGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRSPLDTSSVLYTAVQPNEGDND
                                                                                                    SAPERTCRATLINESPVLSYMDLVGFSYQVANGMEFLASKNCVHRDLAARNVLICEGKLV
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                                                              KICDFGLARDIMRDSNYISKGSTFLPLKWMAPESIFNSLYTTLSDVWSFGI
                                                                                     FLASKNCVHRDLAARN
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lymphoma; CAP.
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comprising at least 10 contiguous nucleotides of any of the abovementioned nucleotide sequences, an isolated polypeptide (encoded within an open reading frame of a CA sequence selected from any of the 95 polynucleotide sequences as mentioned in the specification, or its complement), an isolated antibody, (or its antigen binding fragment) that binds to the above polypeptide, a hybridoma that produces the above monoclonal antibody, a pharmaceutical composition comprising the above monoclonal antibody and a pharmaceutical composition comprising the above monoclonal antibody of ted above, methods for diagnosing cancer of for detecting the presence or absence of cancer cells in an individual, a method for inhibiting growth of cancer cells in an individual, an electronic library comprising the above in an individual, an electronic library comprising the above polypoptide (or their fragments), methods of screening for anticancer activity or for a bioactive agent capable of modulating the activity of a CA protein (CAP), methods for inhibiting the expression of a secciated with expression of a polypeptide in a test cell sample, a method for treating cancers and a method for inhibiting the expression of cancer. The present sequence is a human CAP protein Sequence. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO cat fitp.wipo.int/pub/published_pot_sequences
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                                                                                                                                LLGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRSPLDTSSVLYTAVQPNEGDND
                                                        PVGLPLPSHVSLTGESDGGYMDMSKDESVDYVPMLDMKGDVKYADIESSNYMAPYDNYVP
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                         HLNVVNLLGACTKGGPIYIITEYCRYGDLVDYLHRNXHTFLQHHSDKRRPPSAELYSNAL
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                                                                 HENVONLEGACTKGGPIYIITEYCRYGDLVDYLHRNKHTFLQHHSDKRRPP
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33. .1106
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The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative diseases (e.g. atheroselerosis, liver cirrhosis, pulmonary fibrosis, kidney fibrosis, atheroselerosis, liver cirrhosis, pulmonary fibrosis, kidney fibrosis, scleroderma, keloids, hypertrophic scars, skin wound healing or proliferative vitreoretinopathy). The method may be used in identifying compounds for treating or preventing the development of diseases involving cell contraction, e.g. fibrotic diseases. This is the amino acid mital taken
                                                                                                                                                                                                                                                                                                                                                                                                                                              New polypeptide for treating or preventing diseases associated with an abnormal platelet-derived growth factor (PDGF) level, e.g. cell proliferative or fibrotic diseases, comprises a portion of a PDGF-alpha
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IKUNO Y.
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beta mutant L867M
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                      Misc-difference
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07-MAY-2001;
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The sequence given is one allele of type B human platelet-derived growth factor (PDGF) receptor (PDGF-R). This receptor is typically found on cells of mesenchymal origin. It acts while in the form of two transmembrane glycoproteins, each of which is about 180 kD. This receptor has three major regions. The first is a transmembrane region, which spans the membrane once, separating the regions of the receptor exterior to the extracellular region which contains the domains which bind the PDGF. The third region is an intracellular region which posseses a tyrosine kinase activity. This tyrosine kinase domain is notable in having an insert of approx. 100 amino acids, as compared with most other receptor tyrosine kinase domains which are contiguous or have shorter insert sequences. Fragments of this sequence between 8 and 400 amino acids comprising one or more PDGF ligand binding region from the extracellular domain may be cornect PDGF ligand. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                      Platelet derived growth factor receptor (PDGF-R) poly:peptide(s) - useful as therapeutic and diagnostic agents e.g. for assaying PDGF activity in
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Pred. No. 0;
0; Mismatches
Mature_PDGF-B
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Local Similarity 99.9%;
nes 1105; Conservative
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 /label=
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N-PSDB; AAQ27447.
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                                                                              E594K.
                                                                                                                    Human; platelet derived growth factor receptor beta; PDGFRbeta;
                                                                              derived growth factor receptor beta mutant
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The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative contraction. Exemplary diseases or disorders include cell proliferative cancer, psoriasis) or fibrotic diseases (e.g. atherosclerosis, liver cirrhosis, pulmonary fibrosis, kidney fibrosis, scleroderma, keloids, hypertrophic scars, skin wound healing or proliferative vitreoretinopathy). The method may be used in identifying compounds for treating or preventing the development of diseases involving cell contraction, e.g. fibrotic diseases. This is the amino acid sequence of human platelet derived growth factor receptor (PDGFR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
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/note= "Split tyrosine kinase domian 799. .951
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                                                                               Immunoglobulin-like_domain
                                                                                               /label= Immunogobulin-like_domain
532. .556
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                                          /label=_Mature_PDGFR_beta
227. .29A
                            Signal_peptide
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Location/Qualifiers
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07-MAY-2001; 2001US-0289103P
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/label= Imr
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Matches 1104; Conservative
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Human; platelet derived growth factor receptor beta; PDGFRbeta; hepatotropic; dermatological; nephrotropic; vulnerary; ophthalmological; cytostatic; gene therapy; vaccine; phosphoinositide-Kinase-Inhibitor-3; phospholipase-Inhibitor-C; receptor tyrosine kinase; cell proliferation; cell migration; extracellular matrix synthesis; secretion; cell contraction; cancer; psoriasis; fibrotic diseases; atherosclerosis; liver cirrhosis; pulmonary fibrosis; kidney fibrosis; scleroderma; keloid; hypertrophic scar; wound; proliferative vitreoretinopathy;

factor receptor beta mutant D826N

Human platelet derived growth

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13-FEB-2003

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US2002111304

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Misc-difference

2000US-0250747P 2001US-0289103P

Ikuno

Kazlauskas A,

KAZLAUSKAS IKUNO Y.

(IKUN/)

2001US-00866510

25-MAY-2001;

15-AUG-2002

01-DEC-2000; 07-MAY-2001;

"Split tyrosine kinase domian segment

.951

799. .9 /note=

domain

/label= Immunoglobulin-like_do 335. .398 /label= Immunogobulin-like_dom 532. .556 /label= Transmembrane_domain 604. .694

Domain

Domain

Domain

/label= Signal_peptide 33. .1106 /label= Mature_PDGFR_beta 227. .298

Location/Qualifiers

mutein.

mutant;

sapiens.

Homo

Synthetic

Peptide

Key

Protein

Domain

Domain

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The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative diseases (e.g. cancer, psoriasis) or fibrotic diseases (e.g. atherosclerosis, liver cirrhosis, pulmonary fibrosis, kidney fibrosis, scleroderma, keloids, hypertrophic scars, skin wound healing or proliferative vitreoretinopathy). The method may be used in identifying compounds for treating or preventing the development of diseases involving cell contraction, e.g. fibrotic diseases. This is the amino
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a PDGF-alpha
                                                                                                                            New polypeptide for treating or preventing diseases associated with abnormal platelet-derived growth factor (PDGF) level, e.g. cell proliferative or fibrotic diseases, comprises a portion of a PDGF-al or -beta.
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WPI; 2003-066697/06
N-PSDB; ABS57789.
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                                                                                                                                                                                                                                                                                        Human platelet derived growth factor receptor beta mutant T672M.
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/note= "Split tyrosine kinase
672
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/label= Signal_peptide
33. .1106
/label= Mature_PDGFR_beta
227. .298
/label= Immunoglobulin-like_d
335. .398
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/label= Immunogobulin-like_d
532. .556
/label= Transmembrane_domain
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N-PSDB; ABS57788.
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IKUNO Y.
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Synthetic.
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(IKUN/)
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Pred. No. 0;
2; Mismatches
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Best Local Similarity 99.8%;
Matches 1104; Conservative
  sequence of human mutant D826N
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isolated cancer-associated polynucleotides and polypeptides useful diagnosing, preventing or treating cancers, especially lymphoma antemia, or in screening for agents that modulate cancer.
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                       HLNVVNLLGACMKGGPIYIITEYCRYGDLVDYLHRNKHTFLQHHSDKRRPPSAELYSNAL
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2003US-00388838.
2003US-00417375.
2003US-00461862.
2003US-00663431.
2003US-00737318.
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N-PSDB; ABD32963.
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14-MAR-2003;
15-APR-2003;
13-JUN-2003;
15-SEP-2003;
15-DEC-2003;
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                                                     The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative diseases (e.g. cancer, psoriasis) or fibrotic diseases (e.g. atherosclerosis, liver cirrhosis, pulmonary fibrosis, kidney fibrosis, caleroderma, keloids, hypertrophic scars, skin wound healing or proliferative vitreoretinopathy). The method may be used in identifying compounds for treating or preventing the development of diseases compounds for treating or preventing the development of diseases acid sequence of human platelet derived growth factor receptor (PDGFR)
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ilarity 99.8%;
Conservative
     fibrotic
                                   Claim 7; Page 88-91;
                                                                                                                                                                                                                                                              Similarity
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                                                                                                                                                                                                                                Seguence 1106 AA;
        or
proliferative
or -beta
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                                                                     HODEKAINITVVESGYVRLLGEVGTLOFAELHRSRTLOVVFEAYPPPTVLWFKDNRTLGD
                                                                                                          SSAGEIALSTRNVSETRYVSELTLVRVKVAEAGHYTMRAFHEDAEVQLSFQLQINVPVRV
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                                                                                                                                                                                                                                                                                                       atherosclerosi
                                                                                                                                                                                                                                                                                               growth factor receptor;
drugs; wound healing; prevents
ers; antibodies.
                                                                                                                                                                                                    VEPEPELEQLPDSGCPAPRAEAEDSFL 1106
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45. .47
89. .91
103. .105
215. .217
230. .232
292. .294
307. .309
354. .356
371. .373
468. .470
479. .481
531. .555
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(revised)
(first entry)
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20-OCT-1989
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Human; platelet derived growth factor receptor alpha; PDGFRalpha; hepatotropic; dermatological; nephrotropic; vulnerary; ophthalmological; cytostatic; gene therapy; vaccine; phosphoinositide-Kinase-Inhibitor-3; phospholipase-Inhibitor-C; receptor tyrosine kinase; cell proliferation; cell migration; extracellular matrix synthesis; secretion; cancer; psoriasis; fibrotic diseases; atherosclerosis; liver cirrhosis; pulmonary fibrosis; kidney fibrosis; scleroderma; keloid; hypertrophic scar; wound; proliferative vitreoretinopathy.
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VLGRTLGSGAFGQVVEATAHGLSHSQATMKVAVKMLKSTARSSEKQALMSELKIMSHLGP
                           HLNVVNLLGACTKGGPIYIITEYCRYGDLVDYLHRNKHTFLQHHSDKRRPPSAELYSNAL
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1. 32
/label= Signal_peptide
33. .1106
/label= Mature_PDGFR_beta
227. 298
/label= Immunoglobulin-like_dom
335. 398
/label= Immunogobulin-like_dom
532. .556
/label= Transmembrane_domain
604. .694
/note= "Split tyrosine kinase (
799. .951
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Pred. No. 0;
9; Mismatches
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illarity 98.6%;
Conservative
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                                                                                                                              WPI; 1989-229378/32
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Best Local Similarity
Matches 1091; Conser
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imaging; diagnostic;
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                                                                                                                                                                                                                       The invention describes a polypeptide comprising a portion of the receptor tyrosine kinase platelet-derived growth factor alpha receptor (PDGFalphaR). The polypeptide and the polynucleotide are useful in treating or preventing diseases and conditions associated with an abnormal PDGF level or response, such as cell proliferation, cell migration, extracellular matrix synthesis and secretion or cell contraction. Exemplary diseases or disorders include cell proliferative diseases (e.g. cancer, psoriasis) or fibrotic diseases (e.g. atherosclerosis, liver cirrhosis, pulmonary fibrosis, kidney fibrosis, scleroderma, keloids, hypertrophic scars, skin wound healing or proliferative vitreoretinopathy). The method may be used in identifying compounds for treating or preventing the development of diseases involving cell contraction, e.g. fibrotic diseases. This is the amino acid sequence of human platelet derived growth factor receptor (PDGFR) beta used to make mutant PDGFR beta proteins for use in treating fibrotic
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                                                                                                                                                      New polypeptide for treating or preventing diseases associal abnormal platelet-derived growth factor (PDGF) level, e.g. proliferative or fibrotic diseases, comprises a portion of or -beta.
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                                                                                   (KAZL/) KAZLAUSKAS
(IKUN/) IKUNO Y.
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07-MAY-2001;
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earch completed: March 11, 2005, 07:07:45 ob time : 134.495 secs

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GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                   Copyright
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protein search, using sw model OM protein conda Run on:

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SFL 1106

US-10-027-400-4 5766 1 MRLPGAMPALALKGELLLLS......EQLPDSGCPAPRAEAED Perfect score: Sequence: Title: Perfect

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 of hits satisfying chosen parameters: Total number

283416 segs, 96216763 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR 79:*
1: pir1:*
2: pir2:*
3: pir3:* 4 2 K 4

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ALIGNMENTS

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platelet-derived growth factor receptor beta precursor - human
N; Contains: protein-tyrosine kinase (EC 2.7.1.112)
C;Species: Homo sapiens (man)
C;Date: 31-Dec-1992 #sequence revision 31-Dec-1992 #text_change 09-Ju
C; Accession: A28206; A31195; A38268; A31925; B31925; C31925
R; Gronwald, R.G.K.; Grant, F.J.; Haldeman, B.A.; Hart, C.E.; O'Hara,
Proc. Natl. Acad. Sci. U.S.A. 85, 3435-3439, 1988
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A; Accession: A28206
A; Molecule type: mRNA
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F.S.;

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C; Superfamily: macrophage colony-stimulating factor 1 receptor; immun C; Keywords: ATP; autophosphorylation; glycoprotein; growth factor rec F; 1-32/Domain: signal sequence #status predicted <SIG>
F; 33-1106/Product: platelet-derived growth factor receptor beta #stat F; 33-1106/Product: platelet-derived growth factor receptor beta #stat F; 33-531/Domain: extracellular #status predicted <EXT>
F; 47-102/Domain: immunoglobulin homology <IMM1>
F; 142-192/Domain: immunoglobulin homology <IMM2>
F; 228-293/Domain: immunoglobulin homology <IMM4>
F; 528-295/Domain: immunoglobulin homology <IMM4>
F; 556-1106/Domain: intracellular #status predicted <IMM>
F; 556-1106/Domain: intracellular #status predicted <IMM>
F; 556-1106/Domain: protein kinase homology <KIN>
F; 566-614/Region: protein kinase ATP-binding motif F; 559-965/Domain: protein kinase ATP-binding motif F; 54-100,149-190,235-291,436-508/Disulfide bonds: #status predicted F; 634/Active site: Lys #status predicted F; 634/Active site: Lys #status predicted F; 657/Binding site: phosphate (Tyr) (covalent) (by autophosphorylatic
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Rytacten, Y., Escobedo, J.A.; Kuang, W.J.; Yang-Feng, T.L.; Daniel, T.O.; Tremble, P.M.; Rytacten, Y.; Escobedo, J.A.; Kuang, W.J.; Yang-Feng, T.L.; Daniel, T.O.; Tremble, P.M.; A; Prices Structure of the receptor for platelet-derived growth factor helps define a fam) A; Residues: 1-1098 - (AA2)

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                              SAPERTCRATLINESPVLSYMDLVGFSYQVANGMEFLASKNCVHRDLAARNVLICEGKLV
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76; Mismatches 77;
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Best Local Similarity 85.4%;
Matches 945; Conservative
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RESULT 3
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platelet-derived growth factor receptor beta - Japanese pufferfis
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C; Species: Fugu rubripes (Japanese pufferfish)
C; Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 09-Jul-2004
C; Accession: T30815
R; HOW, G.F.; Venkatesh, B.; Brenner, S.
Genome Res. 6, 1185-1191, 1996
A; Title: Conserved linkage betwen the pufferfish (Fugu rubripes) and human genes for pla A; Reference number: Z20882; MUID: 97129405; PMID: 8973913
A; Reference number: Z20882; MUID: 97129405; PMID: 8973913
A; Reference number: Z20882; MUID: 97129405; PMID: 8973913
A; Reference number: Z20882; MUID: 97129405; PMID: 8973913
A; Reference number: Z20882; MUID: 97129405; PMID: 8973913
A; Ccession: T30815
A; Residues: 1-1048 <HOW>
A; Residues: 1-1048 <HOW>
A; Cross-references: UNIPROT: P79749; EMBL: U63926; NID: g1752706; PID: g1752707; PIDN: AAC600 C; Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin homology;
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Best Local Similarity 48.5%; Pred. No. 1.7e-99;
Matches 518; Conservative 159; Mismatches 321;
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QY 824 HRDLAARNVLICEGKLVKICDFGLARDIMRDSNYISKGSTFLPLKWMAPESIFNSLYTTL 883	SULT 4 HUGA atelet-derived growth factor recept Contains: protein-tyrosine kinase (Species: Homo sapiens (man) Accession: A40162; A32941 Matsui, T.; Heidaran, M.; Miki, T.; ience 243, 800-804, 1989 Title: Isolation of a novel recepto Reference number: A40162; MUID:8913 Accession: A40162 Molecule type: mRNA Residues: 1-1089 AMATS Cross-references: UNIPROT: P16234; G Claesson-Welsh, L.; Eriksson, A.; M Oc. Natl. Acad. Sci. U.S.A. 86, 49, M Oc. Natl. Acad. Sci. U.S.A. 84, 929 Reference number: A32941; MUID:8929 Accession: A32941 Molecule type: mRNA Residues: 1-1089 ACIA> Cross-references: GB:MZ2734; NID:91 Comment: The extracellular domain in Residues: The extracellular domain in Genetics: A32941; MUID:8929 Accession: A32941 Molecule type: mRNA Residues: The extracellular domain in Genetics: The extracellular domain in Map position: 4q11-4q12 Superfamily: macrophage colony-stim A2-102/Domain: immunoglobulin homo 225-524/Domain: immunoglobulin homo 228-292/Domain: immunoglobulin homo 228-292/Domain: immunoglobulin homo 228-292/Domain: immunoglobulin kinase ATP- 42.76,103,179,333,359,458,468/Bindi 49-100,150-189,235-290,435-501/Disu 627/Active site: phosphate (Tyr) (Cuery Match 8 PALALKGELLL-LSLILLIEPQI 8 PALALKGELLL-LSLILLIEPQI 8 PALALKGELLL-LSLILLIEPQI 8 PALALKGELLL-LSLILLIEPQI 8 PALALKGELLL-LSLILLIEPQI 8 PALALKGELLL-LSLILLIEPQI 8 PALALKGELLL-LSLILLIEPQI 8 PALALKGELLL-LSLILLIEPQI	QLSLPSIL-PNENEKVVQLNSSFSLKCFGESEVSWQYPM TFSSVLTLTNLTGLDTGEYFCTHNDSRGLETD-ERKRLYIFV

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Piatelet-derived growth factor receptor alpha precursor - rat

N; Contains: protein-tyrosine kinase (EC 2.7.1.112)
C; Species: Rattus norvegiues (Norway rat)
C; Species: Rattus norvegiues (Norway rat)
C; Accession: A34710; S33767; $25100
R; Accession: A34710; S33767; $25100
R; Accession: A34710; MulD: 90220609; PMID: 2157969
A; Title: Isolation and characterization of the alpha platelet-derived growth factor recentare number: A34710; MulD: 90220609; PMID: 2157969
A; Accession: A34710
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A; Accession: B: Weyer, K. A.; Rouge, M: Loctscher, P:; Pech, M.
B; Meyer, K. A.; Rouge, M: Loctscher, P:; Pech, M.
B; Mercence number: S33764; MUD: 93305723; PMID: 8318539
A; Micleaule type: mRNA
A; Reference and affinity of human and rodent PDGF ligands and recentare number: S33764; MUD: 93305723; PMID: 8318539
A; Accession: S33764; MUD: 93305723; PMID: 8206864
A; Reperimental source: strain Sprague Dawley
A; Reperimental source: strain Sprague Dawley
A; Residues: 33-149; A; Rouge, M: Loctscher
A; Residues: 33-149; A; Rouge, M: Loctscher
A; Restence number: S25096
A; Accession: S25096
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A; Residues: 33-149, 'R', 151-518, 'T', 520-523 <HER2>
A; Cross-references: EMBL: Z14118; NID: 956863; PIDN: CAA78488.1; PID: 956864
C; Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin homology;
C; Keywords: ATP; autophosphorylation; glycoprotein; heterodimer; homodimer; phosphoprote
F;1-23/Domain: signal sequence #status predicted <SIG>
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C; Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 09-Ju C; Accession: 151552
R; Jones, S.D.; Ho, L.; Smith, J.C.; Yordan, C.; Stiles, C.D.; Mercola Dev. Genet. 14, 185-193, 1993
A; Title: The xenopus platelet-derived growth factor alpha receptor: c ion.
A; Reference number: 151552; MUID: 93365089; PMID: 8358864
A; Accession: 151552
A; Accession: 151552
A; Reference number: 151552; MUID: 93365089; PMID: 8358864
A; Accession: 151552
A; Reference number: 151552; MUID: 93365089; PMID: 8358864
C; Accession: 151552
A; Constinuinary; translated from GB/EMBL/DDBJ
A; Residues: 1-1087
A; Molecule type: mRNA
A; Residues: 1-1087
A; Conserfamily: macrophage colony-stimulating factor 1 receptor; immun C; Keywords: ATP; growth factor receptor
C; Superfamily: macrophage colony-stimulating factor 1 receptor; immun C; Keywords: ATP; growth factor receptor
F; 43-103/Domain: immunoglobulin homology < NM>
F; 593-957/Domain: protein kinase homology < NM>
F; 601-609/Region: protein kinase ATP-binding motif
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Pred. No. 9.8e-96;
5; Mismatches 367
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platelet-derived growth factor receptor alpha precursor - mouse
N;Contains: protein-tyrosine kinase (BC 2.7.1.112)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Species: J0-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: I57511; S33727
R;Stlles, C.D.; Wang, C.
Mol. Cell. Biol. 10, 6781-6784, 1990
A;Title: Retinoic acid promotes transcription of the platelet-derived growth factor alpha A;Reference number: I57511; MUID:91061789; PMID:2174116
A;Reference number: I57511, MUID:91061789; PMID:2174116
A;Reference number: I57511, MUID:91061789; PMID:2174116
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary;
A;Molecule type: mRNA
A;References: UNIPROT:P26618; GB:M57683; NID:g199783; PIDN:AAA39733.1; PID:g199784
C;Genetics:
A;Gene: PDGF-alpha-R
C;Genetics:
A;Gene: PDGF-alpha-R
C;Genetics:
A;Gene: PDGF-alpha-R
C;Genetics:
A;Gene: PDGF-alpha-R
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A;Gene: PDGF-alpha-R
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Best Local Similarity 43.8%; Pred. No. 1.3e-93
Matches 494; Conservative 185; Mismatches 36
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F;24-1088/Product: platelet-derived growth factor rece
F;24-523/Domain: extracellular #status predicted <EXT>
F;41-101/Domain: immunoglobulin homology <IMM1>
F;142-190/Domain: immunoglobulin homology <IMM2>
F;227-291/Domain: immunoglobulin homology <IMM4>
F;227-502/Domain: immunoglobulin homology <IMM4>
F;224-547/Domain: transmembrane #status predicted <IM
F;524-547/Domain: intracellular #status predicted <IM
F;590-956/Domain: protein kinase homology <KIN>
F;590-956/Domain: protein kinase ATP-binding motif
F;598-606/Region: protein kinase ATP-binding motif
F;78-99,149-188,234-289,434-500/Disulfide bonds: #stat
F;75,76,88,102,178,352,358,457,467/Binding site: carbo
F;626/Active site: Lys #status predicted
F;848/Binding site: phosphate (Tyr) (covalent) (by aut
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NyContains: protein-tyrosine kinase (EC 2.7.1.112) csfir/fms
C;Species: Felis silvestris catus (domestic cat)
C;Date: 31-Dec-1989 #sequence_revision 31-Dec-1989 #text_change
C;Accession: A31636
R;Woolford, J.; McAuliffe, A.; Rohrschneider, L.R.
Cell 55, 965-977, 1988
A;Title: Activation of the feline c-fms proto-oncogene: multiple
A;Reference number: A31636, WUID:89077553; PMID:2849512
A;Accession: A31636
A;Molecule type: mRNA
A;References: UNIPROT:P13369; EMBL:X03663
C;Genetics:
A;Gene: fms
C;Genetics:
A;Genetics:
A;Gene: fms
C;Superfamily: macrophage colony-stimulating factor 1 receptor;
C;Keywords: ATP; autophosphorylation; glycoprotein; kinase-relat
fic protein kinase
F;1-23/Domain: signal sequence #status predicted <SIG>F;24-980/Product: macrophage colony-stimulating factor 1 receptor
F;24-980/Product: macrophage colony-stimulating factor 1 receptor
F;24-980/Product: macrophage colony-stimulating
F;25-86/Domain: immunoglobulin homology <IMM1>
F;120-179/Domain: immunoglobulin homology <IMM1>
F;120-179/Domain: immunoglobulin homology <IMM1>
F;117-280/Domain: immunoglobulin homology <IMM1>
F;1180/Domain: immunoglobulin homology <IMM1>
F;1180/Do
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Pred. No. 4.5e-87;
52; Mismatches 50
          macrophage colony-stimulating factor ; growth factor receptor
                                  growth factor receptor immunoglobulin homology
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Matches 397; Conservative
         C;Superfamily: mac
C;Keywords: ATP; c
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S33766
platelet-derived growth factor receptor beta - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C; Date: 03-Mar-1994 #sequence_revision 12-Apr-1996 #text_change 09-Ju C; Date: 03-Mar-1994 #sequence_revision 12-Apr-1996 #text_change 09-Ju C; Accession: S33766; S25098
R; Herren, B.; Weyer, K.A.; Rouge, M.; Loetscher, P.; Pech, M.
Biochim. Biophys. Acta 1173, 294-302, 1993
A; Title: Conservation in sequence and affinity of human and rodent PD A; Reference number: S33764; MUID: 93305723; PMID: 8318539
A; Accession: S33766
A; Status: nucleic acid sequence not shown
A; Molecule type: mRNA
A; Residues: 1-499 < HER1>
A; Residues: 1-499 < HER1>
A; Cross-references: UNIPROT: Q05030; EMBL: Z14119; NID: 956869; PIDN: CAAA; Note: the sequence of residues 497-499 is not given in this paper
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F;510-534/Domain: transmembrane #status predicted <TMM>
F;535-980/Domain: intracellular #status predicted <INT>
F;577-915/Domain: protein kinase homology <KIN>
F;585-593/Region: protein kinase ATP-binding motif
F;42-84,127-177,224-278,417-482/Disulfide bonds: #status predicte
F;45,73,94,153,275,302,335,410,477,490/Binding site: carbohydrate
F;613,630,776/Active site: Lys, Glu, Asp #status predicted
F;781,794/Binding site: magnesium (Asn, Asp) #status predicted
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                                                                                                                                                                                                                      --SSILTINNATFQNTGTYHCTEPGNPQGGNAT--
                                                                                                            DB 1;
                                                                                                           Match Local Similarity 34.9%; Score 1432.5; DB 1, Local Similarity 34.9%; Pred. No. 2e-56; les 373; Conservative 159; Mismatches 369;
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protein-tyrosine kinase (EC 2.7.1.112), receptor type kit precursor - rat C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Species: Rattus norvegicus (Norway rat)
C;Species: A99814; S49088
R;Tsujimura, T.; Hirota, S.; Nomura, S.; Niwa, Y.; Yamazaki, M.; Tono, T.; Morii, E.; Kin Blood 73, 1942-1946, 1991
A;Title: Characterization of Ns mutant allele of rats: a 12-base deletion in tyrosine kirl A;Reference number: A49814; MUID:92003944; PMID:1912577
A;Reference number: A49814
A;Retatus: preliminary
A;Molecule type: mRNA
A;Retatus: preliminary
A;Reference number: S49088
R;Tsujimura, T.; Tono, T.; Yamazaki, M.; Nomura, S.; Kitamura, Y.
S;Description: Two isoforms of rat c-kit receptor tyrosine kinase.
A;Reference number: S49088
A;Reference number: S49088
A;Retatus: preliminary
A;Molecule type: mRNA
A;Reference number: S49088
A;Retatus: preliminary
A;Molecule type: mRNA
A;Reference number: S49088
A;Status: preliminary
A;Molecule type: marcophage colony-stimulating factor 1 receptor; immunoglobulin homology; C;Reywords: Afry autophosphorylation; phosphotransferase; tyrosine-specific protein kinase
C;Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin homology kinase
F;S99-322/Domain: immunoglobulin homology kinase
F;S99-322/Domain: protein kinase Afre-binding motif
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KWMAPESIFNSLYTTLSDVWSFGILLWEIFTLGGTPYPELPMNEQFYNAIKRGYRMAQPA
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35.1%; Pred. No. 4.2e-56;
ive 162; Mismatches 345;
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;217-280/Domain: immunoglobulin homology <IMM4>
;316-381/Domain: immunoglobulin homology <IMM4>
;410-484/Domain: immunoglobulin homology <IMM5>
;510-534/Domain: transmembrane #status predicted <TMM>
;535-941/Domain: intracellular #status predicted <INT>
;535-941/Domain: protein kinase homology <KIN>
;585-593/Region: protein kinase ATP-binding motif
;42-84,127-177,224-278,417-482/Disulfide bonds: #status predicted
;45,73,94,153,275,286,302,335,410,477,490/Binding site: carbohydrate
;613,630,776/Active site: Lys, Glu, Asp #status predicted
;781,794/Binding site: magnesium (Asn, Asp) #status predicted
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Local Similarity 35.5%; Pred. No. 5.8e-56;
Les 371; Conservative 155; Mismatches 347;
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Qy	Akurai, M Db 602 Qy 627 Qy 687 Qy 743 PID:g3035 Db 754 homology; protein; Qy 863 Qy 863 Db 754 Covalent) Db 814 Covalent)	TYPHURY TYP
	PRESULT 12 JN0677 Drotein-tyrosine kinase (EC 2.7.1.112), receptor type kit precursor - chicken Drotein-tyrosine kinase (EC 2.7.1.112), receptor type kit precursor - chicken Drotein-tyrosine amaes: tyrosine kinase receptor kit C;Species: Gallus gallus (chicken) C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004 C;Accession: JN0677 B;Sasaki, E.; Okamura, H.; Chikamune, T.; Kanai, Y.; Watanabe, M.; Naito, M.; S R;Sasaki, E.; Okamura, H.; Chikamune, T.; Kanai, Y.; Watanabe, M.; Naito, M.; S A;Title: Cloning and expression of the chicken c-kit proto-oncogene. A;Reference number: JN0677; MUID: 93292995; PMID: 7685729 A;Reference number: JN0677 A;Residues: 1-960 <8AS> A;Cross-references: UNIPROT;Q08156; DDBJ:D13255; NID:g303532; PIDN:BAA02506.1; A;Esperimental source: brain C;Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin C;Superfamily: macrophage colony-stimulating factor 1 receptor; immunoglobulin C;Superfamily: autophosphorylation; glycoprotein; kinase-related transforming rotein kinase F;12-4/Domain: signal sequence #status predicted <sig> F;14-380/Domain: simmunoglobulin homology <ims> F;51-396/Domain: protein kinase homology <ins> F;51-396/Domain: protein kinase ATP-binding motif F;76,135,149,269,286,306,318,338,356,453,469/Binding site: carbobydrate (Asn) (())</ins></ims></sig>	Query Match 24.3%; Score 1401.5; DB 1; Length 960; Best Local Similarity 34.9%; Pred. No. 4.6e-55; Matches 352; Conservative 161; Mismatches 368; Indels 127; Gaps Oy 3 LPGAMPALALKGELLLESLLLEPQISQGLVVTPPGPELVLNVSSTFVLTCSGSAPVVW (3) LPGAMPALALKGELLLSLLLEPQISQGLVVTPPGPELVLNVSSTFVLTCSGSAPVVW (4)

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Protein-tyrosine kinase (EC 2.7.1.112), receptor type kit precursor - mouse protein-tyrosine kinase (EC 2.7.1.112), receptor c-kit planes tyrosine kinase receptor c-kit change 09-Jul-2004 C.Becrate names: tyrosine kinase receptor c-kit change 09-Jul-2004 C.Becrate names: tyrosine kinase receptor c-kit change 09-Jul-2004 C.Becrate names: tyrosine kinase receptor c-kit change 09-Jul-2004 C.Accession: S00494; B44876; I.Barker, P.E.; Jhanwar, S.; Ruddle, F.H.; Besmer, P. DENGO, J. 7, 1003-1011, 1388 A.Reference number: S00444; MUID:88296403; PMID:2465920 A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-75 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-71 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-72 GOID A.Residues: 1-7
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                                                                                                                                    protein-tyrosine kinase (EC 2.7.1.112), receptor type kit precursor - C; Species: Bos primigenius (aurochs)
C; Species: Bos primigenius (aurochs)
C; Date: 19-Dec-1997 #sequence_revision 19-Dec-1997 #text_change 20-Ap
C; Accession: I45877
R; Kubota, T.; Hikono, H.; Sasaki, E.; Sakurai, M.
Gene 141, 305-306, 1994
A; Title: Sequence of a bovine c-kit proto-oncogene cDNA.
A; Reference number: I45877; MUID: 94215924; PMID: 7512939
A; Accession: I45877
A; Reference number: I45877; MUID: 94215924; PMID: 7512939
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match

24.0%; Score 1384.5; DB 2;
Best Local Similarity 34.6%; Pred. No. 2.7e-54;
Matches 357; Conservative 167; Mismatches 360;
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                                                                                                                                                                                                --PELVLNVSSTFVLTCSGSAPVVW--
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F;520-542/Domain: transmembrane #status predicted <TMM>
F;543-975/Domain: intracellular #status predicted <INT>
F;586-929/Domain: protein kinase homology <KIN>
F;594-602/Region: protein kinase ATP-binding motif
F;58-98,137-187,234-293,431-494/Disulfide bonds: #status predicted
F;58-98,137-337,355,370,466,489/Binding site: carbohydrate (Asn)
F;622,639,790/Active site: Lys, Glu, Asp #status predicted
F;795,808/Binding site: magnesium (Asn, Asp) #status predicted
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                                                                                                                                        DB 1;
                                                                                                                                    24.0%; Score 1382.5; DB 1, larity 34.5%; Pred. No. 3.2e-54; Conservative 169; Mismatches 353;
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(c) 1993 - 2005 Compugen Ltd.
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- protein search, using sw model OM protein March 11, 2005, 05:13:43 ; Search time 144.611 Seconds (without alignments) 3916.424 Million cell update Run on:

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Title: Perfect score: Sequence:

US-10-027-400-4 5766 1 MRLPGAMPALALKGELLLLS......EQLPDSGCPAPRAEAEDSFL 1106

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1612378 seqs, 512079187 residues Searched:

1612378 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

UniProt_03:*
1: uniprot_sprot:*
2: uniprot_tremb1:* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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MEDLINE=22013966; PubMed=11882663; DOI=10.1074/jbc.M201507200;
Karthikeyan S., Leung T., Ladias J.A.A.;
"Structural determinants of the Na+/H+ exchanger regulatory facinteraction with the beta 2 adrenergic and platelet-derived gro
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MEDLINE=21450159; PubMed=11567151; DOI=10.1107/S090744490101; Pauptit R.A., Dennis C.A., Derbyshire D.J., Breeze A.L., West Rowsell S., Murshudov G.N.; "NmR trial models: experiences with the colicin immunity profand the p85alpha C-terminal SH2-peptide complex."; Acta Crystallogr. D 57:1397-1404(2001).
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FUNCTION: Receptor that binds specifically to PDGFB and ltyrosine-protein kinase activity. Phosphorylates Tyr resthe C-terminus of PTPN11 creating a binding site for the
                                                                                                                                                         "Integration of proviral DNA into the PDGF beta-receptor gen
I-infected T-cells results in a novel tyrosine kinase productransforming activity.";
Oncogene 15:1051-1057(1997).
                                                                                                                                                                                                                                                                                              SEQUENCE OF 1046-1106 FRUM N.A.
MEDLINE=89028677; PubMed=2846185; DOI=10.1016/0092-8674(88)9
Roberts W.M., Look A.T., Roussel M.F., Sherr C.J.;
"Tandem linkage of human CSF-1 receptor (c-fms) and PDGF rec
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MEDLINE=99142932; PubMed=9989826; DOI=10.1038/sj.onc.1202326
Yokouchi M., Wakioka T., Sakamoto H., Yasukawa H., Ohtsuka Sasaki A., Ohtsubo M., Valius M., Inoue A., Komiya S., Yoshi "APS, an adaptor protein containing PH and SH2 domains, is a with the PDGF receptor and c-Cbl and inhibits PDGF-induced
                                                                                .onc.1201267
Pantazis P.,
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MEDLINE=98043615; PubMed=9373237;
Abe A., Emi N., Tanimoto M., Terasaki H., Marunouchi T., Sai "Fusion of the platelet-derived growth factor receptor beta gene CEV14 in acute myelogenous leukemia after clonal evolut Blood 90:4271-4277(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  receptor in the kinase proteins.";
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99:16899-16903 (2002)
                                                  SEQUENCE OF 548-569 FROM N.A.
MEDLINE=97429921; PubMed=9285559; DOI=10.1038/sj
Chi K.D., McPhee R.A., Wagner A.S., Dietz J.J.,
Goustin A.S.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=15340161; DOI=10.1110/ps.04682504; Zhang Z., Henzel W.J.; "Signal peptide prediction based on analy verified cleavage sites."; Protein Sci. 13:2819-2824(2004).
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Oncogene 18:759-767(1999)
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Cell 58:1121-1133(1989)
Proc. Natl. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                        genes.";
Cell 55:655-661(1988).
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Biol. Chem. 277
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ts with

and heterodimer with PDGFRA. Interac

domain of GRB2.
CATALYTIC ACTIVITY: ATP + a protein tyrosine tyrosine phosphate.
SUBUNIT: Homodimer, and heterodimer with PDGF APS.

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+ pro

= ADP

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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                        DISEASE: Involved in a acute myelogenous leukemia through a chromosomal translocation t(5;14) (q33;q32) that involves PDGFRB and TRIP11. The fusion protein may be involved in clonal evolution of leukemia and eosinophilia.

SIMILARITY: Belongs to the Tyr protein kinase family. CSF-1/PDGF receptor subfamily.

SIMILARITY: Contains 4 immunoglobulin-like C2-type domains.
                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M315178, AAA601491...

REMBL; M315178, AAA601491...

REMBL; M201616, AAA36427.1; -..

REMBL; M3172, AAA102-1106.

REMBL; M3172, AAA600492.1; PFD406196.

REMIN; M17410; -..

REMIN; PRO001495; PFD41616-14 activating factor receptor activity; TAS.

REMIN; M17410; -..

REMIN; M17410; -..

REMIN; PRO00149; PFD4161 activating factor receptor activity; TAS.

REMIN; M17410; -..

REMIN; M17410; -..

REMIN; PRO001495; PFD4161 activating factor receptor activity; REMIN; PRO00149; Prock kinase.

REMIN; PRO00149; Prock kinase.

REMIN; PRO0019; PROFEN; RINASE AFP; 1.

REMIN; PRO0119; PROFEN; RINASE AFP; 1.

REMIN; PRO0119; PROFEN; RINASE AFP; 1.

REMIN; PRO0119; PROFEN; RINASE AFP; 1.

REMING; PRO0119; PROFEN; PROFEN; PROFEN; PRO
SUBCELLULAR LOCATION: Type I membrane protein.
DISEASE: Involved in a form of chronic myelomonocytic leukemia (CMML) characterized by abnormal clonal myeloid proliferation arby progression to acute myelogenous leukemia (AML) through a chromosomal translocation t (5;12) (q33;p13) that involves PDGFRB
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Cytoplasmic (Potential).
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Breakpoint for translocation
TRIP11-PDGFRB.
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                                                                                                                                                                                                                                                                                                                                              Lian A.T., Chien M.B., London C.A.;
Lian A.T., Chien M.B., London C.A.;
Lian A.T., Chien M.B., London C.A.;
Submitted (JAN-2004) to the EMBL/GenBank/DDBJ databases.

-!- SUBCELLULAR LOCATION: Type I membrane protein (By similarity).

-!- SIMILARITY: Belongs to the Tyr family of protein kinases. CSF-

1/PDGF receptor subfamily.

REMBL; AY532634; AAS48371.1; -.

RHSSP; P11362; 1AGW.

GO; GO:0005524; F:ATP binding; IEA.

GO; GO:0004674; F:Protein serine/threonine kinase activity; IEA.

GO; GO:00065021; F:receptor activity; IEA.

GO; GO:00065021; F:vascular endothelial growth factor receptor. . .; I

GO; GO:0006468; P:protein amino acid phosphorylation; IEA.

GO; GO:0007169; P:transmembrane receptor protein tyrosine kin. . .; I
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PROSITE; PS50835; IG LIKE; 2.
PROSITE; PS500107; PROTEIN KINASE ATP; UNKNOWN 1.
PROSITE; PS50011; PROTEIN KINASE TYR; 1.
PROSITE; PS00240; PROTEIN KINASE TYR; 1.
ATP-binding; Glycoprotein; Immunoglobulin domain; Kinase Phosphorylation; Receptor; Transferase; Transmembrane.
SEQUENCE 1103 AA; 123021 MW; A3D66E78A34C5FE0 CRC64
                                                                                                                                                                                                        os-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Platelet-derived growth factor receptor beta.
Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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InterPro; IPR007110; Ig-like.
InterPro; IPR0011009; Kinase like
InterPro; IPR011009; Kinase like
InterPro; IPR01245; Prot kinase
InterPro; IPR001245; Tyr pkinase
InterPro; IPR001245; Tyr pkinase
InterPro; IPR009134; VEGFR.
Pfam; PF00047; ig; 2.
PRINTS; PR01832; VEGFRECEPTOR.
ProDom; PD000001; Prot kinase; 2
SMART; SM00409; IG; 3.
SMART; SM00409; IG; 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           extracellular proteolysis
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SEQUENCE OF 528-1090 FROM N.A.

STRAIN=Wistar;

MEDLINE=21359359; PubMed=11346654; DOI=10.1074/jbc.M102995200;

A Voshizato K., Uyama N., Yamaoka Y.;

Noshizato K., Uyama N., Yamaoka Y.;

"Regulation of cell growth by redox-mediated extracellular proteolysis

T of platelet-derived growth factor receptor beta.";

J. Biol. Chem. 276:28274-28280(2001).

I. Biol. Chem. 276:28274-28280(2001).

-!- FUNCTION: Receptor that binds specifically to PDGFB and has a tyrosine-protein kinase activity. Phosphorylates Tyr residues at tyrosine of GRB2 (By similarity).

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphate.

-!- SUBCELLULAR LOCATION: Type I membrane protein.

-!- SUBCELLULAR LOCATION: Type I membrane protein.

-!- SIMILARITY: Belongs to the Tyr protein kinase family. CSF-1/PDGF
                                                                                                                       .1.112)
                                                                                                                                         Name=Pdgfrb;
Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus
NCBI_TaxID=10116;
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SEQUENCE OF 35-533 FROM N.A.
STRAIN=Sprague-Dawley; TISSUE=Brain;
MEDLINE=93305723; PubMed=8318539; DOI=10.1016/0167-4781(93)90127-Herren B., Weyer K.A., Rouge M., Loetscher P., Pech M.;
"Conservation in sequence and affinity of human and rodent PDGF ligands and receptors.";
Biochim. Biophys. Acta 1173:294-302(1993).
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STRAIN=Sprague-Dawley;
Wang Y., Culty M.;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases
                                               005030; Q8R406; Q925F7;
01-NOV-1997 (Rel. 35, Created)
10-OCT-2003 (Rel. 42, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Beta platelet-derived growth factor receptor precursor (PDGF-R-beta).
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Ig_c2.
Kinase_like.
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EMBL; Z14119; CAA78489.1; -...
EMBL; AF359356; AAK43716.1; -...
PIR; S33766; S33766.
HSSP; P17948; 1QSV.
InterPro; IPR007110; Ig-like.
InterPro; IPR001598; Ig_c2.
InterPro; IPR00199; Kinase like
InterPro; IPR001824; Recepttyrk
InterPro; IPR001824; Recepttyrk
InterPro; IPR001824; VEGFR.
Pfam; PF00047; ig; 3.
Pfam; PF00069; Pkinase; 1.
PRINTS; PR01832; VEGFRECEPTOR.
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                                                                 Craniata; Vertebrata; Euteleostomi
Sciurognathi; Muridae; Murinae; Mu
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TISSUE=Fibroblast;
MEDLINE=87014762; PubMed=3020426;
Yarden Y., Escobedo J.A., Kuang W.-J., Yang-Feng T.L., Daniel Tremble P.M., Chen E.Y., Ando M.E., Harkins R.N., Francke U.,
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PGDR MOUSE STANDARD; PRT; 10
AC P05622;
DT 01-NOV-1988 (Rel. 09, Created)
DT 01-NOV-1988 (Rel. 09, Last sequence upon 105-JUL-2004 (Rel. 44, Last annotation DE Beta platelet-derived growth factor respective of Name=Pdgfrb; Synonyms=Pdgfr;
GN Name=Pdgfrb; Synonyms=Pdgfr;
GN Mammalia; Eutheria; Rodentia; Sciurogn;
OC Eukaryota; Metazoa; Chordata; Craniata
OC Mammalia; Eutheria; Rodentia; Sciurogn;
NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A., AND PARTIAL SEQUENCE
RC TISSUE=Fibroblast;
RX MEDLINE=87014762; PubMed=3020426;
RX Yarden Y., Escobedo J.A., Kuang W.-J.,
RA Yarden Y., Chen E.Y., Ando M.E., Ha
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Prodom; PD000001; Prot kinase; 2.

SMART; SM00408; IGC2; 1.

SMART; SM00219; TyrKc; 1.

PROSITE; PS50835; IG LIKE; 3.

PROSITE; PS00107; PROTEIN KINASE DOM; 1.

PROSITE; PS00109; PROTEIN KINASE TYR; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

ATP-binding; Glycoprotein; Immunoglobulin domain; Phosphorylatic Receptor; Repeat; Signal; Transferase; Transmembrane; Tyrosine-protein kinase.

Tyrosine-protein kinase.

SIGNAL 1 31 Potential.

CHAIN 32 1097 Beta platelet-derived growth facto
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Extracellular (Potential).
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Ig-like C2-type 3.
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MOD_RES 856 Phosphotyrosine (by autocatalysis) (By similarity). CARBOHYD 44 44 N-linked (GlcNAc) (Potential). CARBOHYD 102 N-linked (GlcNAc) (Potential). CARBOHYD 214 214 N-linked (GlcNAc) (Potential). CARBOHYD 291 N-linked (GlcNAc) (Potential). CARBOHYD 306 N-linked (GlcNAc) (Potential). CARBOHYD 353 N-linked (GlcNAc) (Potential). CARBOHYD 370 N-linked (GlcNAc) (Potential). CARBOHYD 444 N-linked (GlcNAc) (Potential). CARBOHYD 467 N-linked (GlcNAc) (Potential). CARBOHYD 478 N-linked (GlcNAc) (Potential).	y Match Local Similarity 85.4%; Pred. No. 9e-291; hes 945; Conservative 76; Mismatches 77; Indels 8; Gaps 2;	1 MRLPGAMPALALKGELLLLSLLLLLEPQISQGLVVTPPGPELVLNVSSTFVLTCSGSAPV 60	WERMSOEPPOEMAKAODGTFSSVLTLTNLTGLDTGEYFCTHNDSRGLETDERKRLYIFV 1	O MWEQMSQVPWQEAAMNQDGTFSSVLTLTNVTGGDTGEYFCVYNNSLGPELSERKRIYIFV 11	PNDAEELFIFLTEITEITIPCRVTDPQLVVTLHEKKGDVALPVPYDHQRGF		ICKTTIGDREVDSDAYYVYRLQVSSINVSVNAVQTVVRQGENITLMCIVIG	TYICKTTIGDREVDSDTYYVYSLQVSSINVSVNAVQTVVRQGESITIRCIV	241 DVVNFEWTYPRKESGRLVEPVTDFLLDMPYHIRSILHIPSAELEDSGTYTCNVTESVNDH 300	TTVVESGYVRLLGEVGTLOFAELHRSRTLQVVFEAYPPPTVLWFKDNRTLGD	SRTLRVVFEAYPMPSVLWLKDNRTL	STRNVSETRYVSELTLVRVKVAEAGHYTMRAFHEDAEVQLSF	RNMSETRYVSELILVRVKVSEAGYYTMRAFHEDDEVQLSFKLQVNVPVR	421 ELSESHPDSGEQTVRCRGRGMPQPNIIWSACRDLKRCPRELPPTLLGNSSEEESQLETNV 480	81 TYWEEEQEFEVVSTLRLQHVDRPLSVRCTLRNAVGQDTQEVIVVPHSLPFKVVVISAILA 54	:	IILIMLWQKKPRYEIRWKVIESVSSDGHEYIYVDPMQLPYDSTWELP	ISLIILIMLWQKKPRYEIRWKVIESVSSDGHEYIYVDPVQLPYDSTWELPRD	AFGQVVEATAHGLSHSQATMKVAVKMLKSTARSSEKQALMSELKIMSH	SGAFGQVVEATAHGLSHSQATMKVAVKMLKSTARSSEKQALMSELKIMSHLG	GACTKGGPIYIITEYCRYGDLVDYLHRNKHTFLQHHSDKRRPPSAELY	<u>CTKGGPIYIITEYCRYGDLVDYLHRNKHTFLQRHSNKHCPPSAELYSN</u>	21 PVGLPLPSHVSL	20 PVGFSLPSHLNLIGESDGGIMDMSKDESIDIVPMLDMKGDIKIADIESFSIMAFIDNIVE; 77	t,
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STRAIN=C3H/He, TISSUE=Mesenchymal Stem Cell;

STRAIN=C3H/He, TISSUE=Mesenchymal Stem Cell;

MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Richards S., Worley R.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Jones S.J., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human "Generation and initial analysis of more than 15,000 full-length human
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Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.

-!- SUBCELLULAR LOCATION: Type I membrane protein (By similar)

-!- SIMILARITY: Belongs to the Tyr family of protein kinases

1/PDGF receptor subfamily.

EMBL; BC055311; AAH55311.1; -.

HSSP; P11362; 1FGI.

GO; GO:0005615; C:extracellular space; TAS.

GO; GO:0016021; C:integral to membrane; TAS.

GO; GO:0016301; F:kinase activity; IMP.
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae
NCBI_TaxID=10090;
                     KICDFGLARDIMRDSNYISKGSTFLPLKWMAPESIFNSLYTTLSDVWSFG)
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003 (TrEMBLrel. 25, Last sequence update)
004 (TrEMBLrel. 26, Last annotation update)
derived growth factor receptor, beta polypeptide.
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STRAIN=C3H/He; TISSUE=Mesenchymal Stem Cell;
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Transmembrane;
GO; GO:0004871; F:signal transducer activity; IDA.
GO; GO:0050730; P:regulation of peptidyl-tyrosine pho
GO; GO:0007165; P:signal transduction; IDA.
InterPro; IPR007110; Ig-like.
InterPro; IPR007110; Ig-like.
InterPro; IPR001824; RecepttyrkinsIII.
InterPro; IPR001824; RecepttyrkinsIII.
InterPro; IPR001824; RecepttyrkinsIII.
InterPro; IPR001824; RecepttyrkinsIII.
InterPro; IPR001245; Tyr_pkinase.
SMART; SM00219; TyrKc; 1.
PROSITE; PS00107; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
PROSITE; PS00109; RECEPTOR TYR KIN III; 1.
ATP-binding; Glycoprotein; Immunoglobulin domain; Kin Phosphorylation; Receptor; Transferase; Transmembrane Tyrosine-protein kinase.
SEQUENCE 1099 AA; 122934 MW; BCE126ACC116F740 CRC
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VAVFVPDRFSPQTLRFI----ESSHGMVTKTSGESTVPCVVTNPNITVTLYDKDTDLPVN
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Prodom; PD000001; Prot_kinase; 2.
SMART; SM00409; IG; 3.
SMART; SM00219; TyrKc; 1.
PROSITE; PS50835; IG LIKE; 2.
PROSITE; PS500107; PROTEIN_KINASE_DOM; 1.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
ATP-binding; Kinase; Receptor; Transferase; Tyrosine-protein SEQUENCE 1048 AA; 117867 MW; 7363EFD38D9B913C CRC64;
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larity 48.5%; Pred. No. 5.8e-136;
Conservative 159; Mismatches 321;
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MEDLINE=97129405; PubMed=8973913;

How G.F., Venkatesh B., Brenner S.;

How G.F., Venkatesh B., Brenner S.;

How G.F., Venkatesh B., Brenner S.;

Conserved linkage between the puffer fish (Fugu rubripes) and had genes for platelet-derived growth factor receptor and macrophage reclony-stimulating factor receptor.";

Genome Res. 6:1185-1191(1996).

R EMBL; U63926; AAC60062.1; -.

R GO; GO:0004713; F:ATP binding; IEA.

R GO; GO:0016740; F:receptor activity; IEA.

R InterPro; IPR001109; Kinase like.

R InterPro; IPR001245; Tyr_pkinase.

R InterPro; IPR001245; Tyr_pkinase.

R InterPro; IPR008134; VEGFR.
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P79749;

O1-MAY-1997 (TrEMBLrel. 03, Created)

O1-MAY-1997 (TrEMBLrel. 26, Last annotation update)

O1-MAY-1997 (TrEMBLrel. 26, Last annotation update)

Flatelet-derived growth factor receptor beta.

Name=PDGFRbeta;

Fugu rubripes (Japanese pufferfish) (Takifugu rubripes).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom:

Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleoste

Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;

Tetradontoidea; Tetraodontidae; Takifugu.
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X SEQUENCE FROM N.A. (1500-000.2).

X Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strausberg R.L., Zeeberg E.B., Buetow K.H., Schaefer C.F., Bhat N.K. Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C. Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P. Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk A. Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanch Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., R.A Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Schein J.E., Jones S.J.M., Marra M.A.;
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MEDLINE=89296915; PubMed=2544881;
Claesson-Welsh L., Eriksson A., Westermark B., Heldin C.H.;
"cDNA cloning and expression of the human A-type platelet-de growth factor (PDGF) receptor establishes structural similar B-type PDGF receptor.";
Proc. Natl. Acad. Sci. U.S.A. 86:4917-4921(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. (ISOFORM 1).
MEDLINE=89130149; PubMed=2536956;
Matsui T., Heidaran M., Miki T., Popescu N., la Rochelle W.,
Pierce J., Aaronson S.;
"Isolation of a novel receptor cDNA establishes the existenc
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SDVWSFGILLWEIFTLGGTPYPELPMNEQFYNAIKRGYRMAQPAHASDEIY
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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01-APR-1990 (Rel. 14, Last sequence update)
01-APR-1990 (Rel. 14, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Alpha platelet-derived growth factor receptor
(PDGF-R-alpha) (CD140a antigen).
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Science 243:800-804(1989)
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                           as
full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                     IsoId=P16234-2; Sequence=VSP_007833, VSP_007834;
Note=No experimental confirmation available;
DISEASE: A fusion of PDGFRA and FIP1L1 (FIP1L1-PDGFRA), due to an interstitial chromosomal deletion, is the cause of some cases of hypereosinophilic syndrome (HES) [MIM:607685], a rare hematologic disorder characterized by sustained overproduction of eosinophils in the bone marrow, eosinophilia, tissue infiltration and organ
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                                                                                       C)
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                                                           MEDLINE=22547205; PubMed=12660384; DOI=10.1056/NEJMoa025217; Cools J., DeAngelo D.J., Gotlib J., Stover E.H., Legare R.D., Cools J., Kutok J., Clark J., Galinsky I., Griffin J.D., Cross N.(Tefferi A., Malone J., Alam R., Schrier S.L., Schmid J., Rose M., Vandenberghe P., Verhoef G., Boogaerts M., Wlodarska I., Kantarjian H., Marynen P., Coutre S.E., Stone R., Gilliland D.G.; "A tyrosine kinase created by fusion of the PDGFRA and FIPILI genesa therapeutic target of imatinib in idiopathic hypereosinophilic
                                                                                                                                                                                                                                                         factor
growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor subfamily.
SIMILARITY: Contains 5 immunoglobulin-like C2-type domains.
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more than 15,000
                        99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                              SUBUNIT: Homodimer, and heterodimer with PDGFR SUBCELLULAR LOCATION: Type I membrane protein. ALTERNATIVE PRODUCTS: Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                               IsoId=P16234-1; Sequence=Displayed;
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              sequences.";
d. Sci. U.S.A.
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M22734; AAA60048.1;
D50017; BAA08742.1;
D50003; BAA08742.1;
D50004; BAA08742.1;
D50006; BAA08742.1;
D50006; BAA08742.1;
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Proc. Natl. Acad.
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EMBL; BC015186; AAH15186.1; -.
PIR; A40162; PFHUGA.
PDB; 1GQ5; X-ray; -.
GGenew, HGNC: 8803; PDGFRA.
MIM; 607685; -.
MIM; 607687; C:integral to plasma membrane; TAS.
GO; GO:000018; F:platelet-derived growth factor alpha-re
GO; GO:000218; F:platelet-derived signal tra
InterPro; IPR001289; Kinase. like.
InterPro; IPR001245; Tyr_Dkinase.
InterPro; IPR001245; Tyr_Critin KINASE_ATP; 1.
PROSITE; PS00107; PROTEIN KINASE_TPR; 1.
PROSITE; PS00109; PROTEIN KINASE_TPR; 1.
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Ig-like C2-type 1.

Ig-like C2-type 3.

Ig-like C2-type 3.

Ig-like C2-type 4.

Protein kinase.

Ser-rich.

ATP (By similarity).

By similarity.

By similarity.

N-linked (GlcNAc...) (FN-linked (GlcNAc..
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/FTId=VSP 007834.
W; 5E3FB9940ACD1BE8
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Pred. No. 7.8e-133;
; Mismatches 341;
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Extracellular
Potential.
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      NDVVNFEWTYPRKESGR---LVEPVTDFLLDMPYHIRSILHIPSAELEDSGTYTCNVTES
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MEDLINE=93365089; PubMed=8358864;
Jones S.D., Ho L., Smith J.C., Yordan C., Stiles C.D., Mercola M.;
Jones S.D., Ho L., Smith J.C., Yordan C., Stiles C.D., Mercola M.;
"The Xenopus platelet-derived growth factor alpha receptor: cDNA cloning and demonstration that mesoderm induction establishes the lineage-specific pattern of ligand and receptor gene expression.";
Dev. Genet. 14:185-193(1993).
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InterPro; IPro...

Ream; PF00047; ig; 3.

Ream; PF00069; Pkinase; 1.

Ream; PF000601; Prot_kinase; 2.

Ream; PF0000001; Prot_kinase; 2.

Ream; PF0000001; Prot_kinase; 2.

Ream; PF0019; Ig; 2.

Ream; PF0019; Ig; 2.

Ream; PF0019; PF0TEIN KINASE ATP; 1.

Recorre; PS00107; PROTEIN KINASE DOM; 1.

Recorre; PS00109; PROTEIN KINASE TYR; 1.

Recorres Transmembrane;

**P-binding; Glycoprotein; Immunoglobulin domain; Phosphorylatic Arp-binding; 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBl the European Bioinformatics Institute. There are no restricuse by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sihor send an email to license@isb-sib.ch).
                                                                                     01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Alpha platelet-derived growth factor receptor precursor (EC (PDGF-R-alpha).
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosi Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: Type I membrane protein. SIMILARITY: Belongs to the Tyr protein kinase family. CS
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                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: Receptor that binds both PDGFA and PDGFB tyrosine-protein kinase activity.

CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP tyrosine phosphate.

SUBUNIT: Homodimer, and heterodimer with PDGFRB.
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0; Ig-like.
9; Kinase like.
9; Prot_kinase.
4; RecepttyrkinsIII.
5; Tyr_pkinase.
6; Tyr_pkinase_AS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    receptor subfamily. SIMILARITY: Contains 5
                                                      STANDARD;
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InterPro; IPR000719; F
InterPro; IPR001824; F
InterPro; IPR001245; 7
InterPro; IPR008266; 7
InterPro; IPR009134; V
                                                                                                                                                                                                                                              Xenopodinae; Xenopus.
NCBI_TaxID=8355;
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5; Mismatches 367;
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MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

Altschul S.F., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange G. Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange G. Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P. Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanche Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J. Gnee S.J., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length and analysis of more than 15,000 full-length
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Q7ZY71;
Q7ZY71;
Q1-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-JUN-2004 (TrEMBLrel. 26, Last annotation update)
Pdgfra-prov protein.
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae
  DLDIFGLNPADESTRSYVILSFENNGDYMDMKQADTMQYVPMLEMKEPSKY
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                          APYDNYVPSAPERTCRATLINES-PVLSYMDLVGFSYQVANGMEFLASKNC
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MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
MEDLINE=22341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
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                                                                                                                                                                                               R HSSP; p3688B 1 JACUB.

R GO; GO:0016021; C:integral to membrane; IEA.

R GO; GO:0016021; C:integral to membrane; IEA.

R GO; GO:0016021; F:receptor activity; IEA.

GO; GO:0016740; F:ransferase activity; IEA.

R GO; GO:0016740; F:ransferase activity; IEA.

R GO; GO:0016740; F:ransferase activity; IEA.

R GO; GO:001659; P:ransmembrane receptor protein tyrosine kin...

R InterPro; IPR001509; F:ransmembrane receptor protein tyrosine kin...

R InterPro; IPR001009; Kinase like.

R InterPro; IPR001824; Receptyrkinse.

R InterPro; IPR001824; Receptyrkinse.

R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Receptyrkinse.

R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Proper Secopty R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; Proper R InterPro; IPR001824; IG INRC INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R INTER R 
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The Tyr family of protein kinases. CSF
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Mismatches
                                -!- SUBCELLULAR LOCATION: Type
-!- SIMILARITY: Belongs to the
1/PDGF receptor subfamily.
EMBL; BC043948; AAH43948.1; -.
HSSP; P36888; IRJB.
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                                                                       WELPRDQLVLGRTLGSGAFGQVVEATAHGLSHSQATMKVAVKMLKSTARSS
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Sciurognathi; Muridae; Murinae
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P20786;
01-FEB-1991 (Rel. 17, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Alpha platelet-derived growth factor receptor properties and the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequ
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 | : : | : : | : : | : : | : | : | TEFHQRGRSTVEGRVSFAKVEETIAVRCLAKNDLGIGNRELKLVAPSLRSELTVAAAVLV
 HLNVVNLLGACTKGGPIYIITEYCRYGDLVDYLHRNKHTFLQHHSDKRRPPSAELYSNAL
 PFSQLVLLL
 SFYHLSEIV
 GFLPNDAEELFIFLTEITIPCRVTDPQLVVTLHEKKGDVALPVPYDHQRGFSGIFED
 DEKAINITVVESGYVRLLGEVGTLOFAELHRSRTLQVVFEAYPPPTVLWFKDNRTLGDSS
 FEWTYP --- RKESGRLVEPVTDFLLDMPYHIRSILHIPSAELEDSGTYTCNVTESVNDHQ
 EESOLETINV
 - PVGLPLPSHVSLTGESDGGYMDMSKDESVDYVPMLDMKGDVKYADIESSNYMAPYDNYV
 PPQEMAKAQDGT--FSSVLTLTNLTGLDTGEYFCTHNDSRGLFTD-FRKRLYIFVPDPTV
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XIXVPDPDM
 INVPVRVLE
 TLVPASILE
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 ER-MSQE--
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 Length 1088
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 CRC64;
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%; Pred. No. 5.7e-130;
191; Mismatches 355;
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11 Similarity 43.8%;
495; Conservative 19
467 4
150 1
519 5
1088 AA;
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 ERLLGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRSPLDTSSVLYTAVQPNE--
 -VDSDNAYIGVTYKNEED
 Mallen-StClair J...

Mallen-StClair J...

"The Role of PDGFRA in Canine Cancer.";

Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.

-!- SUBCELLULAR LOCATION: Type I membrane protein (By similarity).

-!- SIMILARITY: Belongs to the Tyr family of protein kinases. CSF-

-!- SIMILARITY: Belongs to the Tyr family of protein kinases. CSF-

I/PDGF receptor subfamily.

R GO; GO:0016020; C:membrane; IEA.

GO; GO:0004674; F:protein gerine/threonine kinase activity; IEA.

GO; GO:000474; F:protein activity; IEA.

GO; GO:000474; F:transmembrane receptor protein tyrosine kin. .; I

GO; GO:0007169; P:transmembrane receptor protein tyrosine kin. .; I

R InterPro; IPR003599; Ig.

R InterPro; IPR003599; Ig-

R InterPro; IPR0011009; Kinase like.

R InterPro; IPR011009; Kinase like.
 LeCouteur R.A.;
 Euteleostomi;
Canis.
 ISCDSPLEPQDEPEPEPQLELQVEPEPELEQLPDSGCPAPRAEAEDSFL 1106
 B.N., Mallen-StClair J., LeCouteur R.
Tyrosine Kinase Expression in Canine
 -TIE---DIDMMDDIGIDSSDL-VEDSFL
 25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Platelet-derived growth factor receptor alpha (Fragment)
 databases
 Transmembrane
 Craniata; Vertebrata;
; Fissipedia; Canidae;
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in domain;
 the EMBL/GenBank/DDBJ
 PROSITE; PS50835; IG_LIKE; 2.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS00109; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
PROSITE; PS00240; RECEPTOR_TYR_KIN_III; 1.
ATP-binding; Glycoprotein; Immunoglobulin Phosphorylation; Receptor; Transferase; Tr
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 9; Prot_kinase.
4; RecepttyrkinsIII.
0; Ser_thr_pkinase.
5; Tyr_pkinase.
6; Tyr_pkinase_AS.
4; VEGFR.
 PRT;
 GDNDYIPLP
 Canis familiaris (Dog).

Eukaryota; Metazoa; Chordata; Cra
Mammalia; Eutheria; Carnivora; Fi
NCBI TaxID=9615;
[1]
SEQUENCE FROM N.A.
Dickinson P.J., Roberts B.N., Mal
"Evaluation of Receptor Tyrosine
Tumors.";
 InterPro; IFRO1199, Allass InterPro; IPR000719; Prot_kinas InterPro; IPR001249; Recepttyrk InterPro; IPR001245; Tyr_pkinas InterPro; IPR001245; Tyr_pkinas InterPro; IPR008266; Tyr_pkinas InterPro; IPR009134; VEGFR.
Pfam; PF00047; ig; 2.
Pfam; PF00069; Pkinase; 1.
PRINTS; PR01832; VEGFRECEPTOR.
ProDom; PD000001; Prot_kinase; SMART; SM00409; IG; 4.
SMART; SM00409; IG; 4.
SMART; SM00220; S_TKC; 1.
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SKYSDIQRSL
 GFLPNDAEELFIFLTEITIFCRVTDPQLVVTLHEKKGDVALPVPYDHQRGFSGIFED
 RSYICKTTIGDREVDSDAYYVYRLOVSS-INVSVNAVQTVVRQGENITLMCIVIGNDVVN
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 DEKAINITYVESGYVRLLGEVGTLOFAELHRSRTLOVVFEAYPPFTVLWFKDNRTLGDSS
 PPOEMAKAQD--GTFSSVLTLTNLTGLDTGEYFCTHNDSRGLETD-ERKRLYIFVPDPTV
 FEWTYPRKESGR - - - LVEPVTDFLLDMPYHIRSILHIPSAELEDSGTYTCNVTESVNDHQ
 AGETALSTRIVSETRYVSELTLVRVKVAEAGHYTMRAFHEDAEVQLSFQLQINVPVRVLE
 ----SE
 EESQLETNVTYWEEEQEFEVVSTLRLQHVDRPLSVRCTLRNAVGQDTQEVIVVPHSLPFK
 --TRVEETIAVRCLAKNLLGAESRELKLVAPTLRSE
 KYADIESSN
 PLDTSSVLY
 SEKOALMSE
 SSEKOALMSE
 YMAPYDNYVPSAPERTCRATLINE-SPVLSYMDLVGFSYQVANGMEFLASKNCVHRDLAA
 WEEKFEIRP
 WHSEPEKRP
 Gaps
 12 LKGELLLLSLLLLEPQISQGLVVTPPGPELVLNVSSTFVLTCSGSAPVVWERMSQE--
 . 90
 7
 LSESHPDS-GEOTVRCRGRGMPOPNIIWSACRDLKRCPRELPPTLLGNS--
 TWELPRDOLVLGRTLGSGAFGQVVEATAHGLSHSQATMKVAVKMLKSTARS
 SAELYSNAL-PVGLPLPSHVSLTGESDGGYMDMSKDESVDYVPMLDMKGDV
 950 PFSQLVLLERLLGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRS
 Length 107
 Indels
 CRC64;
 3DA424B9C1339D6B
 V Match 19.9%; Score 2303; DB 2; Local Similarity 43.5%; Pred. No. 6.5e-130; nes 495; Conservative 190; Mismatches 347;
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121934 MW;
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 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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 2.7.1.112)
 GONDY I PLP - - DPKPEVADEGPLEGSPSLAS - - ST
 -VDSDNAYI
 growth
 CSF-1/PDGF
 --DIDMMDDIGIDSSDL-VEDSFL
 LNEVNTSSTISCDSPLEPQDEPEPQLELQVEPEPELEQLPDSGCPAPRAEAEDSFL
 Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
 ø
 SUBUNIT: Homodimer, and heterodimer with PDGFRB.
SUBUNIT: Homodimer, and heterodimer with PDGFRB.
SUBCELLULAR LOCATION: Type I membrane protein.
SIMILARITY: Belongs to the Tyr protein kinase family. CSF-receptor subfamily.
SIMILARITY: Contains 5 immunoglobulin-like C2-type domains
 factor alpha receptor: sequence correlation with metastatic
 and has
 of the platelet-derived
 Greenfeld L., Feldman M
 (EC
 +
 precursor
 >>gene 7:1567-1575(1992).
FUNCTION: Receptor that binds both PDGFA and PDGFB
tyrosine-protein kinase activity.
CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP
SFYHLSEIVENLLPGQYKKSYEKIHLDFLKSDHPAVARMR
 morphogenesis; IMP.
 PGDS MOUSE STANDARD; PRT; 1089 AA. P26618; Q62046; 01-AUG-1992 (Rel. 23, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 05-JUL-2004 (Rel. 44, Last annotation update) Alpha platelet-derived growth factor receptor (PDGF-R-alpha).
 -TIE-
 SEQUENCE FROM N.A.
MEDLINE=91061789; PubMed=2174116;
Stiles C.D., Wang C.;
"Retinoic acid promotes transcription factor alpha-receptor gene.";
Mol. Cell. Biol. 10:6781-6784(1990).
 Prot_kinase.
RecepttyrkinsIII.
Tyr_pkinase.
Tyr_pkinase_AS.
 MEDLINE=92334866; PubMed=1321404; Do M.S., Fitzer-Attas C., Gubbay J. Eisenbach L.; "Mouse platelet-derived growth factitissue-specific expression and correphenotype."; Oncogene 7:1567-1575(1992).
 EMBL; M84607; AAA39904.1; -.
EMBL; M57683; AAA39733.1; -.
PIR; I57511; S33727.
HSSP; P11362; 1FGK.
MGD; MGI:97530; Pdgfra.
GO; GO:0030539; P:male genital morg GO; GO:009887; P:organogenesis; IN InterPro; IPR007110; Ig-like.
InterPro; IPR003598; Ig c2.
InterPro; IPR011009; Kinase like.
 --IKREDE
 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
 tyrosine phosphate.
SUBUNIT: Homodimer,
 IPR011009;
IPR000719;
IPR001824;
IPR001245;
 1040 IETGSSSYF-
 (Mouse)
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GTPYPELPMNEQFYNAIKRGYRMAQPAHASDEIYEIMQKCWEEKFEIRPPFSQLVLLLER
|||||| : :: ||| || |||||||| || :|
|GTPYPGMMVDSTFYNKIKSGYRMAKPDHATSEVYEIMVQCWNSEPEKRPSFYHLSEIVEN
 ---RKESGRLVEPVTDFLLDMPYHIRSILHIPSAELEDSGTYTCNVTESVNDHQDE
 --TLTVPKATVKDSGEYECAARQATKEVKEM
 KAINITYVĘSGYVRLLGEVGTLOFAELHRSRTLOVVFEAYPPPTVLWFKDNRTLGDSSAG
 ESHPDS-GEOTVRCRGRGMPOPNIIWSACRDLKRCPRELPPTLLGNSSEESQLETNVTY
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 O7TSJ3 PRELIMINARY; PRT; 1089 AA.
O7TSJ3;
O1-OCT-2003 (TrEMBLrel. 25, Created)
O1-OCT-2004 (TrEMBLrel. 26, Last sequence update)
O1-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Pdgfra protein.
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Murinae; Mus
 WTYPGEVRNKGITMLEEIKLPSIKLVY
 1001
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 OEMAKAQD--GTFSSVLTLTNLTGLDTGEYFCTHNDSRGLETD-ERKRLYI
 CKTTIGDREVDSDAYYVYRLQVSS-INVSVNAVQTVVRQGENITLMCIV
 Phosphoryl
 growth
 Length
 Indels
 CRC64;
 (Potential)
 Potential.

Alpha platelet-derived grreceptor.

Extracellular (Potential)

Cytoplasmic (Potential).

Ig-like C2-type 1.

Ig-like C2-type 3.

Ig-like C2-type 4.

Protein kinase.

ATP (By similarity).

By similarity).

ATP (By similarity).

N-linked (GlCNAC...) (FN-linked (GlC
 lin domain; Ph
Transmembrane
 > D (in Ref. 1).
> D (in Ref. 1).
> L (in Ref. 1).
> G (in Ref. 1).
> G (in Ref. 1).
 Ή.
 Score 2292.5; DB Pred. No. 2.8e-129 ; Mismatches 361
InterPro; IPR009134; VEGFR.

Pfam; PF00047; ig; 4.

Pfam; PF00069; Pkinase; 1.

PRINTS; PR01832; VEGFRECEPTOR.

ProDom; PD000001; Prot kinase; 2.

SMART; SM00408; IGc2; 1.

SMART; SM00219; TyrKc; 1.

PROSITE; PS50835; IG LIKE; 3.

PROSITE; PS00107; PROTEIN KINASE DOM; 1.

PROSITE; PS00109; PROTEIN KINASE DOM; 1.

PROSITE; PS00109; PROTEIN KINASE TYR; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

ATP-binding; Glycoprotein; Immunoglobulin dol Receptor; Repeat; Signal; Transferase; Transferosine-protein kinase.

SIGNAL 124 Alpha platelet-chain
 MW;
 88;
 LLLSLLLLEPQISQGLV-
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STRAIN=C57BL/6; TISSUE=Brain;

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Strausberg R.L., Seberg B., Buetow K.H., Schaler G.D.,

A Altechul S.F., Zeeberg B., Buetow K.H., Schaler G.D.,

A Altechul S.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Whiting M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

A Nhiting M., Madan A., Young A.C., Schevchonko Y., Butterfield Y.S.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

A Jones S.J., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human
 127
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 ength human
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 LVĽSCLĽTGPGLÍSCQĽLLPSILPNENĖKIVQLNŠSFSĽRČVĠESEVSWQHPMSEEDDPN
 LLLSLLLLLEPQISQGLV---VTPPGPELVLNVSSTFVLTCSGSAPVVWER-MSQE--PP
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 rity)
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 SEQUENCE FROM N.A.
STRAIN=C57BL/6; TISSUE=Brain;
Strausberg R.;
Strausberg R.;
Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: Type I membrane protein (By simila-!- SIMILARITY: Belongs to the Tyr family of protein kinases 1/PDGF receptor subfamily.
EMBL; BC053036; AAH53036.1; -.
HSSP; P36888; IRJB.
 128 LPNDAEELFIFLTEITEITIPCRVTDPQLVVTLHEKKGDVALPVPYDHQRG
 QEMAKAQD - - GTFSSVLTLTNLTGLDTGEYFCTHNDSRGLETD - ERKRLYI
 ••
 Length
 Prodom; PD000001; Prot_kinase; 2.
SMART; SM00408; IGc2; 1.
SMART; SM00219; TyrKc; 1.
PROSITE; PS50835; IG_LIKE; 3.
PROSITE; PS500107; PROTEIN KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN KINASE_TYR; 1.
PROSITE; PS00240; RECEPTOR TYR KIN III; 1.
ATP-binding; Glycoprotein; Immunoglobulin domain; Kinase; Phosphorylation; Receptor; Transferase; Transmembrane;
 Indels
 CRC64;
 GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0016021; C:integral to membrane; TAS.
GO; GO:0030539; P:male genital morphogenesis; IMP.
GO; GO:0009887; P:organogenesis; IMP.
InterPro; IPR007110; Ig-like.
InterPro; IPR001109; Kinase like.
InterPro; IPR00109; Kinase like.
InterPro; IPR001824; RecepttyrkinsIII.
InterPro; IPR001824; RecepttyrkinsIII.
InterPro; IPR001826; Tyr_pkinase.
 Sci. U.S.A. 99:16899-16903(2002).
 . 2292.5; DB 2;
No. 2.8e-129;
smatches 361;
 07AAFD2BAA12533A
 Mismatches
 Ig_c2.
Kinase_like.
Prot_kinase.
RecepttyrkinsIII.
Tyr_pkinase.
Tyr_pkinase_AS.
 Score
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 122682 MW;
 188;
 39.8%;
 and mouse cDNA sequences."
Proc. Natl. Acad. Sci. U.S
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SEQUENCE 1089 AA;
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 YICKTTIGDREVDSDAYYVYRLQVSS-INVSVNAVQTVVRQGENITLMCIVIGNDVVNFE
 WTYP---RKESGRLVEPVTDFLLDMPYHIRSILHIPSAELEDSGTYTCNVTESVNDHQDE
 EIALSTRNVSETRYVSELTLVRVKVAEAGHYTMRAFHEDAEVQLSFQLQINVPVRVLELS
 WEBEQEFEVVSTLRLQHVDRPLSVRCTLRNAVGQDTQEVIVVPHSLPFKVVVISAILALV
 ESHPDS-GEOTVRCRGRGMPOPNIIWSACRDLKRCPRELPPTLLGNSSEEESQLETNVTY
 VPLGMTDSLVIVEEDDSAIIPCRTTDPETQVTLH--NNGRLVPASYDSRQGFNGTFSVGP
 --- VDSDNAYIGVTYKNEEDKL
 (TrEMBLrel. 13, Created)
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 PRELIMINARY
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 VVNFEWTYPRKESGRLVEPVTDFLLDMP-YHIRSILHIPSAELEDSGTYTCNVTESVNDH
 -GIFSSVLTLTNLTGLDTGEYFCTHNDSRGLETD-ERKRLYIFVPD
 FLAGPYTCKTMVKGVEFKSDEFLIYILRATSQLPVEIEALKTVYKTGETIVVTCVVFDNE
 TERMSQEPPO
 YDHORGESGI
 FEDRSYICKTTIGDREVDSDAYYVYRLQVSS-INVSVNAVQTVVRQGENITLMCIVIGND
 -QYPVT
 Gaps
 MEDLINE=20302546; PubMed=10842055; DOI=10.1016/S0925-4773(00)00321-X
 sis both
 EMBL; AF18842; AAF01460.1; -.

HSSP; P36888; 1RJB.

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0005524; F:ATP binding; IEA.

GO; GO:0004872; F:receptor activity; IEA.

GO; GO:0006468; F:transferase activity; IEA.

GO; GO:0005021; F:vascular endothelial growth factor receptor.

GO; GO:0005021; F:vascular endothelial growth factor receptor.

GO; GO:0007169; P:transmembrane receptor protein tyrosine kin.

InterPro; IPR007110; Ig-like.

InterPro; IPR007110; Ig-like.

InterPro; IPR001824; RecepttyrkinsIII.

InterPro; IPR001824; RecepttyrkinsIII.

InterPro; IPR001245; Tyr_pkinase.

InterPro; IPR001245; Tyr_pkinase.

InterPro; IPR009134; VEGFR.

Pfam; PF00047; Ig; II.
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 1087
 Craniata; Vertebrata; Euteleos: Galliformes; Phasianidae; Phas
 protein (By simila of protein kinases
 Οſ
 LKGELLLLSLLLLEPQISQGLVVTPPGPELVLNVSSTFVLTCSGSAPVV
 -- PTIVPNRNEMVVQLNSNFTLKCSGDSEVSW
 chondrogene
 PTVGFLPNDABELFIFLTEITEITIPCRVTDPQLVVTLHEKKGDVALPVP
 | : | | : | | : | | : | | EGSHRIDIRHEENNSGLFVTVLEVGNASAAHTGMYVCYYNHTQVEDGEVE
 PROSITE; PS50835; IG_LIKE; 2.
PROSITE; PS00290; IG_MHC; UNKNOWN 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
PROSITE; PS00240; RECEPTOR_TYR_KIN_III; 1.
ATP-binding; Glycoprotein; Immunoglobulin domain; Kinase;
 Indels
 CRC64;
 Length
 Transmembrane;
 26, Last annotation update)
 F3306BDD3D983E31
 DB 2;
 361;
 limb
 Score 2270; Di
Pred. No. 6.4e
76; Mismatches
 modulates
 I membrane
Tyr family
 ATP-binding; Glycoprotein; Immunoglobuli
Phosphorylation; Receptor; Transferase;
 factor receptor
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 2
 122939 MW;
 factor
 176;
 Eukaryota; Metazoa; Chordata; C
Archosauria; Aves; Neognathae;
Gallus.
 vivo and in vitro.";
h. Dev. 94:13-24(2000).
SUBCELLULAR LOCATION: Type
SIMILARITY: Belongs to the
1/PDGF receptor subfamily.
 VEGFRECEPTOR.
Prot_kinase;
 39.4%;
 2; AAF01460.1;
IRJB.
 InterPro; IPR009134; VEGFR
Pfam; PF00047; ig; 1.
PRINTS; PR01832; VEGFRECEF
ProDom; PD000001; Prot_kir
SMART; SM00409; IG; 2.
SMART; SM00219; TYrKc; 1.
 Conservative
 growth
01-MAR-2004 (TrEMBLrel.
Platelet-derived growth
Name=PDGFR-a;
Gallus gallus (Chicken).
 LTGPLLTLCOLPL-
 kinas
 Tyrosine-protein ki
SEQUENCE 1087 AA;
 al Similarity
499; Conserv
 "Platelet-derived
 EMAKAQD-
 NCBI_TaxID=9031;
 Ataliotis P.;
 in vivo and
Mech. Dev.
 15
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 123
 182
 Query Match
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 PPFSQLVLLLERLLGEGYKKKYQQVDEEFLRSDHPAILRSQARLPGFHGLRSPLDTSSVL
 --GDNDYIIPLPDPKPEVADEGPLEGSPSLASSTLNEVNT
 -- MRGDCDNAYIG
 --QKVEETLAVRCVARNDLGAVTRELKLVAPTLRS
 ODEKAINITYVESGYVRLLGEVGTLOFAELHRSRTLOVVFEAYPPPTVLWFKDNRTLGDS
 SAGEIALSTRNVSETRYVSELTLVRVKVAEAGHYTMRAFHEDAEVOLSFQLQINVPVRVL
 LT-ÈİVTSSNRVQETRFQSVLKLIRAKEEDSGTILWLLKNEDEIKRYTFSLLIQVPALIL
 :| : | | | | | | | | | | | | : | | : | : | : | | | : | | | : | | : | | | : | | | : | | : | | : | | : | : | | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | : | :
 EEESQLETNVTYWEEEQEFEVVSTLRLQHVDRPLSVRCTLRNAVGQDTQEVIVVPHSLPF
 PSAELYSNAL-PVGLPLPSHVSLTGESDGGYMDMSKDESVDYVPMLDMKGDVKYADIESS
 Q9DE49
Q9DE49;
Q9DE49;
Q1-MAR-2001 (TrEMBLrel. 16, Created)
Q1-MAR-2001 (TrEMBLrel. 16, Last sequence update)
Q1-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Q1-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Q1-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Blatelet-derived growth factor receptor alpha.
Name=pdgfra;
Brachydanio rerio (Zebrafish) (Danio rerio).
Brachydanio rerio (Zebrafish) (Danio rerio).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
Cyprinidae; Danio.
 1106
 SSTISCDSPLEPQDEPEPPOLELQVEPEPELEQLPDSGCPAPRAEAEDSFL
 ELSESHPDS - GEOTVRCRGRGMPOPNIIWSACRDLKRCPRELPPTLLGNS -
 | | | ::| -|| ||| ||::: :||:|||||::|
| PSFYHLSEIVESLLPGEYKKSYEKIHLDFLKSDHPAVTR-
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 6 PQSVQAPLIWPQRESMEVSLHSTFRLTCRGQTELSW----NGPVFIDDQTNSVKKGLFIS
 SGRLVEPUT
 LVRVKVAEAGHYTMRAFHEDAEVQLSFQLQINVPVRVLELSESHPDSGE-QTVRCRGRGM
 VLTLTNLTGLDTGEYFCTHNDSRGLETDERKRLYIFVPDPTVGFLPNDAEELFIFLTEIT
 TVTISNATAVHTGEYVCSSEPFNSTES----TIYIYVPDPQTPFVPSMTPFENHVLTSYD
 GDREVDSDA
 ETRYVSELT
 ETSYQGVLN
 PQISQGLVVTPPGPELVLNVSSTFVLTCSGSAPVVWERMSQEP----PQEMAKAQDGTFSS
 DFLLDMPYHIRSILHIPSAELEDSGTYTCNVTESVNDHQDEKAINITVVESGYVRLLGEV
 EVVCTAGGS
 Gaps
 Liu L., Balasubramaniyan N.V., Ge R.;

Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.

-!- SUBCELLULAR LOCATION: Type I membrane protein (By similarit C -!- SIMILARITY: Belongs to the Tyr family of protein kinases. C 1/PDGF receptor subfamily.

RMBL; AF200951; AAG43479.1; -.

HSSP; P36888; 1RJB.
 2;
 EITIPCRVTDPQLVVTLHEKKGDVALPVPYDHQRGFSGIFEDRSYICKTTI
 YYVYR-LQVSSINVSVNAVQTVVRQGENITLMCIVIGNDVVNFEWTYPRKE
 GTLOFAELHRSRTLQVVFEAYPPPTVLWFKDNRTLGDSSAGEIALSTRNVS
 Length 105
 Indels
 Score 2210; DB 2;
Pred. No. 2.5e-124;
9; Mismatches 344;
 179;
 38.3%;
 Query Matcn
Best Local Similarity 44.1
Watches 469; Conservative
 27
 84
 144
 62
 118
 204
 178
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700
 465
 642
 734
 793
 755
 851
 GPIYIITEYCRYGDLVDYLHRNKHTFLQHHSDKRRPPSAELYSNALPVGLPLPSHVSLTG
 PQPNIIWSACRDLKRCPRE----LPPTLLGNSSEEESQLETNVTYWEEEQEFEVVSTLRL
 --DNHIESHIIF
 -----IDNDDAYMGVLYKNQGKMKTRESGFDEQRL
 |: |||||| | :: | :| :| :: | SSDSGYIIPLPDLDPLSNEDYSKRNRHSSQTSEESAIDTGSSSS
 -- DNDYIIPLPDPKPEVADEGPLEGSPSLASSTLNEVNTSSTIS
 PFPEVDWDICKNLKHCANDSSQWMPLPI--NSTDITVELQMNV-
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- protein search, using sw model OM protein March 11, 2005, 05:13:43 ; Search time 142.389 Seconds (without alignments) 3916.424 Million cell update Run on:

updates/sec

US-10-027-400-2 5652 1 MGTSHPAFLVLGCLLTGLSL......IDMMDDIGIDSSDLVEDSFL 1089 Title: Perfect score: Sequence:

1612378 segs, 512079187 residues Searched:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Scoring table:

1612378 of hits satisfying chosen parameters: Total number

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

UniProt\_03:\*
1: uniprot\_sprot:\*
2: uniprot\_trembl:\* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

|           | scription     | 6234 homo sapi | 6e7g6 canis fa  | sj3 mus muscu | 26618 mus  | 20786 rattus no | 9puf6 gallus | 26619 xenopus | 7zy71               |        | ~      | _        | brachydar | 3 fugu | 3 homo sapi |            | พนธ ก      | Q7tmr8 mus musculu | rattus nor | canie  | fugn   |        | สนต เ  | Q90269 brachydanio | fugu rubri |        |        |        | capra hirc | 43481 | 9774 | . Q9tqq0 sus scrofa |
|-----------|---------------|----------------|-----------------|---------------|------------|-----------------|--------------|---------------|---------------------|--------|--------|----------|-----------|--------|-------------|------------|------------|--------------------|------------|--------|--------|--------|--------|--------------------|------------|--------|--------|--------|------------|-------|------|---------------------|
| SUMMARIES | Ω             |                | Q6 <u>E7G</u> 6 | Q7TSJ3        | PGDS MOUSE | PGDS_RAT        | Q9PUF6       | PGDS_XENLA    | Q72Y <del>7</del> 1 | Q6P4H5 | Q8C4N3 | Q8AXC7   | Q9DE49    | Q8AXC8 | Q7Z608      | PGDR_HUMAN | PGDR_MOUSE | Q7TMR8             | PGDR_RAT   | Q6QNF3 | P79749 | Q75WK5 | Овсенв | Q90269             | Q8UVR9     | Q9W755 | QBJFR5 | QBAXC6 | KIT_CAPHI  | Ή     | 11   | Q9TQQ0              |
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|           | 9 1           | 5652           | 40              | 23            | 22         | 。               | 57           | 24            | 22                  | 71     | 359    | <u>.</u> | 36        | 29     | 269         | 4.         | 336.       | 32                 | 232        | 285.   | ς.     | 132.   | 204    | 4                  | 835.       | 554.   | 553.   | 52     | 148        | ij    | 47   | 47                  |
|           | Regult<br>No. | 1              | 8               | m             | 4          | ហ               | φ            | 7             | 80                  |        |        |          |           |        |             |            |            |                    |            |        |        |        |        | 23                 |            |        |        |        |            |       |      |                     |

| Q7yrv7 canis famil<br>Q8wn23 canis famil | q1 sus scrof<br>93 canis fam | 7799 canis fami<br>8156 gallus gal | 3702 rattus rat | 311    | 9662 homo sa | 072 | c8k9 mus mus | 6ii | dir | LB8           |
|------------------------------------------|------------------------------|------------------------------------|-----------------|--------|--------------|-----|--------------|-----|-----|---------------|
| Q7YRV7<br>Q8WN23                         | Q9TQQ1<br>Q9XS93             | KIT_CANFA                          | 3702            | Q63116 | 9966         | II  | œ            | EII | 600 | 7TS8          |
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| 90                                       | 1469<br>1469                 |                                    | 146             | 145    | 7.           | 54. | 53.          | 145 | 50. | 50.           |
| 32<br>33                                 | 3 3<br>5 4                   | 36<br>37                           | 38              | 39     | 40           | 41  | 42           | 43  | 44  | <b>4</b><br>Ծ |

## ALIGNMENTS

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 M.A.;
15,000 full-length human
 IsoId=P16234-2; Sequence=VSP 007833, VSP 007834;
Note=No experimental confirmation available;
Note=No experimental confirmation available;
DISEASE: A fusion of PDGFRA and FIP1L1 (FIP1L1-PDGFRA), due to an interstitial chromosomal deletion, is the cause of some cases of hypereosinophilic syndrome (HES) [MIM:607685], a rare hematologic disorder characterized by sustained overproduction of eosinophils in the bone marrow, eosinophilia, tissue infiltration and organ
 Q
 F-1/PDGF
 Cross N.C.
Rose M.,
 j.;
jenes
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 9,11
 X-RAY CRYSTALLOGRAPHY (2.2 ANGSTROMS) OF 1185-1189 IN COMPLEX W SLC9A3R1 AND PDGFRB.

MEDLINE=22013966; PubMed=11882663; DOI=10.1074/jbc.M201507200;

Karthikeyan S., Leung T., Ladias J.A.A.;

Karthikeyan S., Leung T., Ladias J.A.A.;

"Structural determinants of the Na+/H+ exchanger regulatory facinteraction with the beta 2 adrenergic and platelet-derived grcifactor receptors.";

J. Biol. Chem. 277:18973-18978(2002).

J. Biol. Chem. 277:18973-18978(2002).

-!- FUNCTION: Receptor that binds both PDGFA and PDGFB and has tyrosine-protein kinase activity.
 receptor subfamily.
SIMILARITY: Contains 5 immunoglobulin-like C2-type domains
 MEDLINE=22547205; PubMed=12660384; DOI=10.1056/NEJMoa025217; Cools J., DeAngelo D.J., Gotlib J., Stover E.H., Legare R.D., Cortes J., Kutok J., Clark J., Galinsky I., Griffin J.D., Cros. Tefferi A., Malone J., Alam R., Schrier S.L., Schmid J., Rose I Vandenberghe P., Verhoef G., Boogaerts M., Wlodarska I., Kantarjian H., Marynen P., Coutre S.E., Stone R., Gilliland D. "A tyrosine kinase created by fusion of the PDGFRA and FIPILI at the apeutic target of imatinib in idiopathic hypereosinophil
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 use by non-profit institutions as long as its content i modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sior send an email to license@isb-sib.ch).
 damage.
SIMILARITY: Belongs to the Tyr protein kinase family. CS
Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.; "Generation and initial analysis of more than 15,000 full-and mouse cDNA sequences.";
 tyrosine phosphate.
SUBUNIT: Homodimer, and heterodimer with PDGFRB.
SUBCELLULAR LOCATION: Type I membrane protein.
ALTERNATIVE PRODUCTS:
Event=Alternative splicing; Named isoforms=2;
 and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
DISEASE.
 IsoId=P16234-1; Sequence=Displayed;
Name=2;
 Engl. J. Med. 348:1201-1214(2003)
 JOINED.
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 AAA96715.1;
AAA60048.1;
BAA08742.1;
 M21574;
M22734;
D50017;
D50002;
D50004;
D50006;
D50006;
D500006;
D50009;
D50009;
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 Name=1
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TAS
REMBL; D50012; BAA08742.1; JOINED.

REMBL; D50013; BAA08742.1; JOINED.

REMBL; D50014; BAA08742.1; JOINED.

REMBL; D50014; BAA08742.1; JOINED.

REMBL; D50014; BAA08742.1; JOINED.

REMBL; D50015; BAA08742.1; JOINED.

REMBL; D50015; BAA08742.1; JOINED.

REMBL; BC015186; AAH15186.1;

REMBL; BC015186; AAH15186.1;

REMBL; BC01586; AAH15186.1;

REMBL; BC01586; AAH15186.1;

REMBL; BC01586; AAH15186.1;

REMBL; BC01586; RemBL REMBL;

ROJ GO:0005186; F:placelet-derived growth factor alpha-recept. ..;

REAPORT PRO01283; P:cell proliferation; TAS.

GO; GO:0007166; P:cell proliferation; TAS.

GO; GO:0007166; P:cell surface receptor linked signal transdu. ..;

REMBL; REMBL; RECEPTORINGS REMBL;

REPERPO; IPRO01249; Recepty**RinsIII.

REPERPO; IPRO01249; Prot Kinase.

INE REPERPO; PRO01245; TYT DKinase.

REMBL; SM00104; PROFER REMBL;

REMBL; SM00104; PROFER REMBL;

REMBL; SM00104; PROFER REMBL;

REMBL; SM00104; PROFER REMBL;

REMBL; SM00109; REMERPOR TYR KINASE ARP; I.

REMSITE; PS00107; REMERPOR TYR KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMSITE; PS00109; PROFERIN KINASE TYR; I.

REMINGGLOBULIN domain; Phosphorylation; Receptor; Signal; Transmembrane; Tyrosine-proferin Kinase.

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 growth factor
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(Potential).
 autocatalysis)
 Alpha platelet-derived grow receptor.

Extracellular (Potential).

Cytoplasmic (Potential).

Ig-like C2-type 1.

Ig-like C2-type 4.

Ig-like C2-type 4.

Protein kinase.

Ser-rich.

ATP (By similarity).

ATP (By similarity).

By similarity.

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Score 5652; DB 1; Pred. No. 5.3e-297 Mismatches 0;

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Query Match Best Local Similarity 100.0%; Matches 1089; Conservative ( MGTSHPAFLVLGCLLTGLSLILCQLSLPSILPNENEKVVQLNSSFSLRCFGESEVSWQYP

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A Mallen-StClair J., London C.A.;

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Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.

C -1- SUBMITTY: Belongs to the Tyr family of protein (By similarity).

C -1- SIMILARITY: Belongs to the Tyr family of protein kinases. CSF-

1/PDGF receptor subfamily.

R GO; GO:0016020; C:membrane; IEA.

R GO; GO:0004674; F:ATP binding; IEA.

R GO; GO:0004872; F:receptor activity; IEA.

R GO; GO:0004872; F:receptor activity; IEA.

R GO; GO:0004872; F:receptor activity; IEA.

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CO: GO:0007169; P:transmembrane receptor protein tyrosine kin. . .; I
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 SEQUENCE FROM N.A.
Dickinson P.J., Roberts B.N., Mallen-StClair J., LeCouteur R.
"Evaluation of Receptor Tyrosine Kinase Expression in Canine
 Length 1079;
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Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases
 CRC64
 Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
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28, Last sequence update)
28, Last annotation update)
factor receptor alpha (Frag
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larity 95.9%; Pred. No. 2.2e-283;
Conservative 24; Mismatches 20;
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STRAIN=C57BL/6; TISSUE=Brain;

X KEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

X Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

B Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Raha S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Villalon D.K., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

A Whiting M., Madan A., Young A.C., Scheutz J., Myers R.M., Butterfield Y.S.,

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A Jones S.J., Marra M.A.;

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domain; Kinase;
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 Craniata; Vertebrata; I
Sciurognathi; Muridae;
 and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 Last sequence update)
Last annotation update)
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Best Local Similarity 91.8%; Pred. No. 2.7e-274;
Matches 1000; Conservative 48; Mismatches 41;
 Pfam; PF00047; ig; 2.

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SMART; SM00408; IGC2; 1.

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PROSITE; PS50835; IG_LIKE; 3.

PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.

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ATP-binding; Glycoprotein; Immunoglobulin do Phosphorylation; Receptor; Transferase; Tran Tyrosine-protein kinase.

SEQUENCE 1089 AA; 122682 MW; 07AAFD2BAA1
 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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STRAIN=C57BL/6; TISSUE=Brain;
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 CSF-1/PDGF
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MEDLINE=92334866; PubMed=1321404;

MEDLINE=92334866; PubMed=1321404;

Do M.S., Fitzer-Attas C., Gubbay J., Greenfeld L., Feldman M., Eisenbach L.;

Thouse platelet-derived growth factor alpha receptor: sequence, tissue-specific expression and correlation with metastatic phenotype.";

Concogene 7:1567-1575(1992).

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
NCBI_TaxID=10090;
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MEDLINE=91061789; PubMed=2174116;
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 EMBL; M84607; AAA39904.1; -.
EMBL; M57683; AAA39733.1; -.
PIR; I57511; S33727.
HSSP; P11362; 1FGK.
MGD; MGI:97530; Pdgfra.
GO; GO:0009887; P:male genital morphogenesis; IMP.
GO; GO:0009887; P:organogenesis; IMP.
InterPro; IPR007110; Ig-like.
InterPro; IPR001109; Kinase like.
InterPro; IPR001919; Prot_kinase.
InterPro; IPR001824; RecepttyrkinsIII.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR008266; Tyr_pkinase.
InterPro; IPR008266; Tyr_pkinase.
InterPro; IPR00814; VEGFR.
 P26618; Q62046;
01-AUG-1992 (Rel. 23, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Alpha platelet-derived growth factor receptor (PDGF-R-alpha).
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 Stiles C.D., Wang C.;
"Retinoic acid promotes transcription factor alpha-receptor gene.";
Mol. Cell. Biol. 10:6781-6784(1990).
 PRINTS; PRO1832; VEGFRECEPTOR.
PRINTS; PR01832; VEGFRECEPTOR.
ProDom; PD000001; Prot_kinase; 2.
SMART; SM00408; IGc2; 1.
SMART; SM00219; TyrKc; 1.
PROSITE; PS50835; IG_LIKE; 3.
PROSITE; PS00107; PROTEIN_KINASE_ATP;
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 Name=Pdgfra;
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Murinae; Rat
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 Craniata; Vertebrata; E
Sciurognathi; Muridae;
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P20786;
01-FEB-1991 (Rel. 17, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Alpha platelet-derived growth factor receptor pre (PDGF-R-alpha).
Name=Pdgfra;
Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrat Mammalia; Eutheria; Rodentia; Sciurognathi; Murid NCBI TaxID=10116;
[1]
SEQUENCE FROM N.A.
STRAIN=Sprague-Dawley;
MEDLINE=90220609; PubMed=2157969;
Lee K.H., Bowen-Pope D.F., Reed R.R.;
Lee K.H., Bowen-Pope D.F., Reed R.R.;
"Isolation and characterization of the alpha plat factor receptor from rat olfactory epithelium.";
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PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
PROSITE; PS00240; RECEPTOR TYR KIN III; 1.
ATP-binding; Glycoprotein; Immunoglobulin domain; Phosphoryl; Receptor; Repeat; Signal; Transferase; Transmembrane; Tyrosine-protein kinase.
Tyrosine-protein kinase.
SIGNAL 1 24 Potential.
CHAIN 25 1089 Alpha platelet-derived growth fi
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Ig-like C2-type 4.
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 Score 5229; D
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R RGD; 3284; PdGdfa.

InterPro; IPR007110; Ig-like.

InterPro; IPR00129; Kinase like.

InterPro; IPR001245; Tyr_Dkinase.

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R InterPro; IPR001245; Tyr_Dkinase.

R InterPro; IPR00124; VGGFR.

R PR0017; Ig; 4.

PR0175; PR0019; Proft kinase; 2.

SMART; SM00409; IG; 3.

R PROSITE; PS00107; PROTEIN KINASE DOM; 1.

PROSITE; PS00109; PROTEIN KINASE DOM; 1.

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 tyrosine phosphate.
SUBUNIT: Homodimer, and heterodimer with PDGFRB.
SUBCELLULAR LOCATION: Type I membrane protein.
SIMILARITY: Belongs to the Tyr protein kinase family. CSF-receptor subfamily.
SIMILARITY: Contains 5 immunoglobulin-like C2-type domains
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 SEQUENCE OF 33-524 FROM N.A.

MEDLINE=93305723; PubMed=8318539; DOI=10.1016/0167-4781(93)9.

Herren B., Weyer K.A., Rouge M., Loetscher P., Pech M.;

"Conservation in sequence and affinity of human and rodent Pligands and receptors.";

Biochim. Biophys. Acta 1173:294-302(1993).

-!- FUNCTION: Receptor that binds both PDGFA and PDGFB and hityrosine-protein kinase activity.

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + pro
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Extracellular (Potential)
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Cytoplasmic (Potential Ig-like C2-type 1.

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Protein kinase.

ATP (By similarity).

ATP (By similarity).

By similarity.

Phosphotyrosine (by a similarity).

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30; GO: 0016021; C:integral to membrane; IEA.

30; GO: 0004872; F: Receptor activity; IEA.

30; GO: 0016740; F: transferase activity; IEA.

30; GO: 0016740; F: transferase activity; IEA.

30; GO: 0006468; P: protein amino acid phosphorylation; IEA.

30; GO: 0007169; P: transmembrane receptor protein tyrosine kin.

InterPro; IPR003109; Ig-like.

InterPro; IPR0011009; Kinase like.

InterPro; IPR001019; Prot_kinase.

InterPro; IPR001245; Tyr_pkinase.

InterPro; IPR008266; Tyr_pkinase.

InterPro; IPR009134; VEGFR.
                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=20302546; PubMed=10842055; DOI=10.1016/S0925-4773(00)
Ataliotis P.;
"Platelet-derived growth factor A modulates limb chondrogenes
                                                        Craniata, Vertebrata, Euteleos
; Galliformes, Phasianidae, Pha
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SMART; SM00219; TyrKc; 1.
PROSITE; PS50835; IG_LIKE; 2.
PROSITE; PS00290; IG_MHC; UNKNOWN 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
PROSITE; PS00240; RECEPTOR TYR KIN III; 1.
ATP-binding; Glycoprotein; Immunoglobulin domain; Kin Phosphorylation; Receptor; Transferase; Transmembrantyrosine-protein kinase.
SEQUENCE 1087 AA; 122939 MW; F3306BDD3D983E31 CR
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Platelet-derived growth factor receptor alpha.
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Mech. Dev. 94:13-24(2000).
-!- SUBCELLULAR LOCATION: Type I
-!- SIMILARITY: Belongs to the Ty
1/PDGF receptor subfamily.
EMBL; AF188842; AAF01460.1; -.
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Gallus gallus (Chicken).
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F-1/PDGF
                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.

MEDLINE=93365089; PubMed=8358864;
Jones S.D., Ho L., Smith J.C., Yordan C., Stiles C.D., Mercola M.;
Jones S.D., Ho L., Smith J.C., Yordan C., Stiles C.D., Mercola M.;
"The Xenopus platelet-derived growth factor alpha receptor: cDNA
cloning and demonstration that mesoderm induction establishes the
lineage-specific pattern of ligand and receptor gene expression.";
Dev. Genet. 14:185-193(1993).

-!- FUNCTION: Receptor that binds both PDGFA and PDGFB and has a
tyrosine-protein kinase activity.

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                                                                          tomi
                                                                                                                                                                                                                                                                                                                                                                                                                                         immunoglobulin-like C2-type domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBI the European Bioinformatics Institute. There are no restricuse by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fentities requires a license agreement (See http://www.isb-sikor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PRO1832; VEGFRECEPTOR.
ProDom; PD000001; Prot_kinase; 2.
SMART; SM00409; IG; 2.
SMART; SM00219; TyrKc; 1.
PROSITE; PS50835; IG LIKE; 3.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
PROSITE; PS00240; RECEPTOR_TYR_KIN_III; 1.
ATP-binding; Glycoprotein; Immunoglobulin domain; Phosphoryla Receptor; Repeat; Signal; Transferase; Transmembrane;
                                                                                                                                                                Alpha platelet-derived growth factor receptor precursor (EC (PDGF-R-alpha).

Xenopus laevis (African clawed frog).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae
                                                                                                                                                                                                                                                                                                                                                                               tyrosine phosphate.
SUBUNIT: Homodimer, and heterodimer with PDGFRB.
SUBCELLULAR LOCATION: Type I membrane protein.
SIMILARITY: Belongs to the Tyr protein kinase family. CSI receptor subfamily.
SIMILARITY: Contains 5 immunoglobulin-like C2-type domain
1019 TPLPDIDPVSEDE-LGKRNRHSSQTSEESAIETGSSSSTFIKREDETIEDI
                                                                                                                                     23, Created)
23, Last sequence update)
44, Last annotation update)
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Tyr_pkinase.
Tyr_pkinase_AS.
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Ig-like.
Kinase like.
Prot_kīnase.
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InterPro; IPR001245; Tyr-
InterPro; IPR008266; Tyr-
InterPro; IPR009134; VEGF
Pfam; PF00047; ig; 3.
Pfam; PF00069; Pkinase; 1
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                                                                                                                STANDARD;
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InterPro; IPR000719;
                                   SSDLVEDSFL
                                               SSDLVEDSFL
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                                                                                                                                                                                                                                           TaxID=8355;
                                                                                                                                     01-AUG-1992
01-AUG-1992
05-JUL-2004
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PGDS_XENLA
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                                                             (Potential)
Potential.

Alpha platelet-derived greeptor.

Extracellular (Potential) Potential.

Cytoplasmic (Potential).

Ig-like C2-type 1.

Ig-like C2-type 2.

Ig-like C2-type 3.

Protein kinase.

ATP (By similarity).

ATP (By similarity).

By similarity.

N-linked (GlcNAc...) (N-linked (GlcNAc.
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Pred. No. 5.6e-221;
04; Mismatches 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     104;
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|--SEVKNILS
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TISSUE=Embryo;

X Erausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Richards S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

A Nahiting M., Madan A., Young A.C., Shevchenko Y., Butterfield Y.S.,

A Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

A Jones S.J., Marra M.A.,

A Jones S.J., Marra M.A.,

Redergtion and initial analysis of more than 15,000 full-length human
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ne P.H.,
            CDFGLARDI
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O7ZY71,
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O7ZY71,
O1-JUN-2003 (TrEMBLrel. 24, Created)
O1-JUN-2003 (TrEMBLrel. 24, Last sequence update)
O1-JUN-2004 (TrEMBLrel. 26, Last annotation update)
Pdgfra-prov protein.
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopodinae; Xenopus.
NCBI_TaxID=8355;
                                                                                                                                                                                                         CTKSGPIYIITEYCFYGDLVNYLHKNRDSFLSHHPEKPKKELDIFGLNPAD
                                                                                                   MHDSNYVSKGSTFLPVKWMAPESIFDNLYTTLSDVWSYGILLWEIFSLGGT
                                                                                                                                                                     KIHLDFLKSDHPAVARMRVDSDNAYIGVTYKNEEDKLKDWEGGLDEORLSA
                                                                                                                                                                                                                                                                                                             99:16899-16903 (2002)
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Proc. Natl. Acad. Sci. U.S.A. [2]
SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                            GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0004872; F:ATP binding; IEA.

GO; GO:0004872; F:receptor activity; IEA.

GO; GO:0005021; F:vascular endothelial growth factor receptor.

GO; GO:0005021; F:vascular endothelial growth factor receptor.

GO; GO:0005021; F:vascular endothelial growth factor receptor.

GO; GO:0007169; P:protein amino acid phosphorylation; IEA.

GO; GO:0007169; P:transmembrane receptor protein tyrosine kin.

InterPro; IPR003106; Ig_MHC.

InterPro; IPR003006; Ig_MHC.

InterPro; IPR001824; RecepttyrkinsIII.

InterPro; IPR001824; RecepttyrkinsIII.

InterPro; IPR008266; Tyr_pkinase_AS.

InterPro; IPR009134; VEGFR.
                                                                                                              SEQUENCE FROM N.A.
TISSUE=Embryo;
Klein S., Strausberg R.;
Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
Submitted (JAN-2003) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: Type I membrane protein (By similarity)
-!- SIMILARITY: Belongs to the Tyr family of protein kinases. CSF
-!- SIMILARITY: Belongs in the Tyr family of protein kinases.
                           S.W.,
                                                         The NIH Xenopus
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Probom; PD000001; Prot_kinase; 2.

SMART; SM00409; IG; 3.

SMART; SM00219; TyrKc; 1.

PROSITE; PS50835; IG_LIKE; 3.

PROSITE; PS00290; IG_MHC; UNKNOWN 1.

PROSITE; PS00107; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.

PROSITE; PS00240; RECEPTOR_TYR_KIN_III; 1.

ATP-binding; Glycoprotein; Immunoglobulin domain; Kinase; Phosphorylation; Receptor; Transferase; Transmembrane; Tyrosine-protein kinase.

Tyrosine-protein kinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1087
          1132; PubMed=12454917; DOI=10.1002/dvdy.10174; Strausberg R.L., Wagner L., Pontius J., Clifton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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                                                         research:
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Mismatches
                                                       for Xenopus
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                                                                                    225:384-391 (2002)
                                                      and genomic tools
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les 817; Conser
TISSUE=Embryo;
MEDLINE=22341132;
                            Klein S.L., Str
Richardson P.;
"Genetic and ge
initiative.";
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A Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

B Rownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

A Roback S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

A Jones S.J., Marra M.A.;

"Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                             more than 15,000 full-length human
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Proc. Natl. Acad.
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TISSUE=Lung;
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.24260389
 KVTISVHEKGFIEIKPTFSQLEAVNLHEVKHFVVEVRAYPPPRISWLKNNL
                                  TTDVEKIQEIRYRSKLKLIRAKEEDSGHYTIVAQNEDAVKSYTFELLTQVP
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Catarrhini; Hominidae
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05-JUL-2004 (TrEMBLrel.
05-JUL-2004 (TrEMBLrel.
05-JUL-2004 (TrEMBLrel.
Hypothetical protein.
Hypothetical protein.
Homo sapiens (Human).
Eukaryota; Metazoa; Chor
Mammalia; Eutheria; Prin
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OBC4N3;
OBC4N3;
O1-MAR-2003 (TrEMBLrel. 23, Created)
O1-MAR-2004 (TrEMBLrel. 23, Last sequence update)
O1-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 16 days embryo head cDNA, RIKEN full-length e library, clone:C130063B01 product:platelet derived growth receptor, alpha polypeptide, full insert sequence.
Name=Pdgfra;
Mus musculus (Mouse).
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Sciurognathi; Muridae;
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STRAIN=C57BL/6J; TISSUE=Head;
MEDLINE=99279253; PubMed=10349636;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA c
Meth. Enzymol. 303:19-44(1999).
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STRAIN=C57BL/6J; TISSUE=Head;
MEDLINE=21085660; PubMed=11217851;
RIKEN FANTOM CONSOrtium;
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Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
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STRAIN=C57BL/6J; TISSU
The FANTOM Consortium,
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STRAIN=C57BL/6J; TISSUE=Head;

STRAIN=C57BL/6J; TISSUE=Head;

STRAIN=C57BL/6J; TISSUE=Head;

STRAIN=C57BL/6J; TISSUE=Head;

A Shibata K., Itoh M., Aizawa K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Tujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

"RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";

Genome Res. 10:1757-1771(2000).
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Saraine E. Straine B. A.

Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P., Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W., Fukuda S., Furuno M., Hanagaki T., Haraoka T., Hirozane T., Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T., Azch H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S., Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S., Katoh H., Kawai J., Kojima Y., Sano H., Sach H., Saitoh H., Sakai C., Sakai K., Sakazume N., Ohasaki Y., Saitoh H., Sasaki D., Shibata K., Sakai K., Sakazume N., Sano H., Sasaki D., Shibata K., Sakai C., Sakai K., Sakazume N., Sagobe Y., Tagawa A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.; Towaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.; Towaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.; Li EmBL; AKO81664; BAC38283.1; -.

Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.; Submitted (App. 2002) to the EMBL/GenBank/DDBJ databases.

B. GO; GO:0005615; C:extracellular space; TAS.

GO; GO:0005615; C:extracellular space; TAS.

GO; GO:0005615; C:extracellular space; TAS.

GO; GO:0005615; C:extracellular morphogenesis; IMP.

InterPro; IPRO03598; Ig_C2.

R. InterPro; IPRO03598; Ig_C2.

R. InterPro; IPRO01824; RecepttyrkinsIII.

R. InterPro; IPRO01824; RecepttyrkinsIII.

R. Pfam, PPRO047; Ig_C.

R. InterPro; IPRO01934; VEGFR.

R. Pfam, PPRO047; IPRO09134; VEGFR.
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                   annotation
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SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Head;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes
Genome Res. 10:1617-1630(2000).
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Pred. No. 8.4e
16; Mismatches
                "Analysis of the mouse transcriptome based 60,770 full-length cDNAs.";
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PRINTS; PR01832; VEGFRECEPTOR.
ProDom; PD000001; Prot_kinase; 1.
SMART; SM00408; IGc2; 1.
PROSITE; PS50835; IG LIKE; 3.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS0011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00240; RECEPTOR_TYR_KIN_III; 1.
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the RIKEN Genome Exploration Research
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#GO; GO:0016021; C:integral to membrane; IEA.

#GO; GO:0004872; F:ATP binding; IEA.

#GO; GO:0004872; F:receptor activity; IEA.

#GO; GO:000468; F:ransferase activity; IEA.

#GO; GO:0006468; F:vascular endothelial growth factor receptor.

#GO; GO:0006468; P:protein amino acid phosphorylation; IEA.

#GO; GO:0007169; P:transmembrane receptor protein tyrosine kin...

#InterPro; IPR0013599; IG.

#InterPro; IPR001109; Kinase like.

#InterPro; IPR001824; RecepttyrkinsIII.

#InterPro; IPR001824; Tyr_pkinase.

#InterPro; IPR008266; Tyr_pkinase_AS.

#InterPro; IPR009134; VEGFR.
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PRINTS; PR01832; VEGFRECEPTOR.

PRODOM; PD000001; Prot_kinase; 2.

SMART; SM00409; IG; 3.

SMART; SM00219; TyrKc; 1.

PROSITE; PS50835; IG LIKE; 2.

PROSITE; PS500107; PROTEIN KINASE ATP; 1.

PROSITE; PS00109; PROTEIN KINASE DOM; 1.

PROSITE; PS00109; PROTEIN KINASE TYR; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

ATP-binding; Glycoprotein; Immunoglobulin don Phosphorylation; Receptor; Transferase; Transferase; Transferase 1062 AA; 118636 MW; 5439854FE17;
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MEDLINE=22481137; PubMed=12592706;
Williams H., Brenner S., Venkatesh B.;
Williams H., Brenner S., Venkatesh B.;
"Characterization of the platelet-derived growth factcand c-kit genes in the pufferfish Fugu rubripes.";
DNA Seq. 13:263-270(2002).
-!- SUBCELLULAR LOCATION: Type I membrane protein (By
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Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
-!- SUBCELLULAR LOCATION: Type I membrane protein (By similarity -!- SIMILARITY: Belongs to the Tyr family of protein kinases. CS 1/PDGF receptor subfamily.

EMBL; AF200951; AAG43479.1; -.

EMBL; AF200951; AAG43479.1; -.

RSS; P3688; IRUB.

ZFIN; ZDB-GENE-990415-208; pdgfra.

GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0005524; F:ATP binding; IEA.

GO; GO:0005524; F:ATP binding; IEA.

GO; GO:0005524; F:ATP binding; IEA.

GO; GO:0005621; F:vascular endothelial growth factor receptor.

GO; GO:0005021; F:vascular endothelial growth factor receptor.

GO; GO:0007169; P:transmembrane receptor protein tyrosine kin.

InterPro; IPR007110; Ig-like.

InterPro; IPR001109; Kinase like.

InterPro; IPR00109; Kinase like.
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InterPro; IPR001824; RecepttyrkinsIII.

InterPro; IPR001245; Tyr_pkinase.

InterPro; IPR008266; Tyr_pkinase.

InterPro; IPR008266; Tyr_pkinase.

InterPro; IPR009134; VEGFR.

Prom; Pro0047; ig; 1.

PRINTS; PR01832; VEGFRECEPTOR.

PRODOM; PR0019; Prot kinase; 2.

SMART; SM0408; IGc2; 1.

SMART; SM0219; TyrKc; 1.

PROSITE; PS50835; IG LIKE; 2.

PROSITE; PS50010; PROTEIN KINASE ATP; 1.

PROSITE; PS00109; PROTEIN KINASE DOM; 1.

PROSITE; PS00109; PROTEIN KINASE TYR; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

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PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.

PROSITE; PS00240; RECEPTOR TYR KIN III; 1.
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Local Similarity 61.5%; Pred. No. 3e-173;
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Ol-MAR-2003 (TrEMBLrel. 23, Createa;
Ol-MAR-2003 (TrEMBLrel. 23, Last sequence update)
TOL-MAR-2004 (TrEMBLrel. 26, Last annotation update)
TOL-MAR-2004 (TrEMBLrel. 26, Last annotation update)
B PDGFRalpha isoform 2.
Name=PDGFRalpha;
Name=PDGFRalpha;
Name=PDGFRalpha;
Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi
C Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleoste
C Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleoste
C Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Totradontoidea; Tetraodontidae; Takifugu.
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GO; GO: 0016021; C: integral to membrane; IEA.

GO; GO: 0005524; F: ATP binding; IEA.

GO; GO: 0004872; F: receptor activity; IEA.

GO; GO: 0016740; F: transferase activity; IEA.

GO; GO: 0005021; F: vascular endothelial growth factor receptor.

GO; GO: 00056468; P: protein amino acid phosphorylation; IEA.

GO; GO: 0007169; P: transmembrane receptor protein tyrosine kin.

InterPro; IPR003599; Ig.

InterPro; IPR007110; Ig-like.

InterPro; IPR011009; Kinase like.

InterPro; IPR01009; Kinase like.

InterPro; IPR000719; Prot_kinase.
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MQYVPMLEMNEASKYSPIQRSDYDHPPSHRQ---FNDEAESLLSDDSAEGL
                                                                         KWMAPESIFDNLYTTLSDVWSYGILLWEIFSLGGTPYPGMMVDSTFYNKIK
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                                                                                                                                                                                     MEDLINE=22481137; PubMed=12592706;
Williams H., Brenner S., Venkatesh B.;
"Characterization of the platelet-derived growth fi
and c-kit genes in the pufferfish Fugu rubripes.";
DNA Seq. 13:263-270(2002).
-!- SUBCELLULAR LOCATION: Type I membrane protein
-!- SIMILARITY: Belongs to the Tyr family of protei
1/PDGF receptor subfamily.
EMBL; AF456419; AAN87556.1; -.
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PS00107; PROTEIN KINASE ATP;
PS50011; PROTEIN KINASE DOM;
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PRINTS; PR01832; VEGFRECEPTOR.
ProDom; PD000001; Prot_kinase.
SMART; SM00409; IG; 3.
SMART; SM00219; TyrKc; 1.
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nes 245;
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|| Similarity 60.2%; Pred. No. 1.3e
| 662; Conservative 148; Mismatches
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
PROSITE; PS00240; RECEPTOR TYR KIN III; 1.
ATP-binding; Glycoprotein; Immunoglobulin Phosphorylation; Receptor; Transferase; TrYrosine-protein kinase.
SEQUENCE 1078 AA; 120388 MW; 45857F6DE
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update)
ceptor precursor (EC 2.7.1.112)
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Murray M.J.;
ng for the human platelet-
ice for more than one receptor
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ni; Hominidae; Homo.
          -RKANSSVGKW-
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MEDLINE-22388257; Pubbmed=12477932; DOI=10.1073/pnas.242603899;

Strausberg R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

A Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Rochard D.K., Marra M.A.;

Rochard D.K., Marra M.A.;

Rochard J., Marra M.A.;
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                                          Claesson-Welsh L., Eriksson A., Moren A., Severinsson L., Ek
Oestman A., Betsholtz C., Heldin C.-H.;
"cDNA cloning and expression of a human platelet-derived gro!
(PDGF) receptor specific for B-chain-containing PDGF molecule
Mol. Cell. Biol. 8:3476-3486(1988).
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SEQUENCE OF 548-569 FROM N.A.
MEDLINE=97429921; PubMed=9285559; DOI=10.1038/sj.onc.1201267
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MEDLINE=89028677; PubMed=2846185; DOI=10.1016/0092-8674(88)998
Roberts W.M., Look A.T., Roussel M.F., Sherr C.J.;
"Tandem linkage of human CSF-1 receptor (c-fms) and PDGF recent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTOPHOSPHORYLATION SITES.
MEDLINE=89376563; PubMed=2550144; DOI=10.1016/0092-8674(89)9
Kazlauskas A., Cooper J.A.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Integration of proviral DNA into the I-infected T-cells results in a novel transforming activity."; Oncogene 15:1051-1057(1997).
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SEQUENCE FROM N.A.
MEDLINE=89096941; PubMed=2850496;
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ci. 13:2819-2824(2004)
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Goustin A.S.;
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Cytoplasmic (Potential).
Protein kinase.
Breakpoint for translocation to f
TRIP11-PDGFRB.
ATP (By similarity).
ATP (By similarity).
      InterPro; IPR009134; VEGFR.

Pfam; PF00069; Pkinase; 1.

ProDom; PR01832; VEGFRECEPTOR.

ProDom; PR01832; VEGFRECEPTOR.

SMART; SM00408; IGC2; 1.

SMART; SM00219; TyrKc; 1.

PROSITE; PS50835; IG LIKE; 2.

PROSITE; PS50011; PROTEIN KINASE ATP; 1.

PROSITE; PS00109; PROTEIN KINASE DOM; 1.

PROSITE; PS00109; PROTEIN KINASE TYR; 1.

PROSITE; PS00109; PROTEIN KINASE TYR; 1.

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